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PORTUGAL AND THE EUROPEAN SPICE TRADE, 1480-1580.



A thesis submitted by Stefan Halikowski Smith on 28 May 2001 with a view to obtaining the degree of Doctor of Philosophy at the European University Institute, Fiesole.

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1. FOREWORD. A NOTE ON SPICES AND THEIR EVOLUTION AS A CATEGORY OF TRADED COMMODITIES.

The history of spices is the history of a set of natural products whose provenance inspired pre-modern European man to dream of exotic lands far to the east that were, in Albert Deman's definition, synonymous with abundance, exuberance and luxury.¹ These same spices helped relieve him of the monotony and flavourless staples of his diet and bestow on him pleasant tastes and odours, an aestheticisation of his existence; they helped to preserve the bodies of his ancestors, sacralise social and religious rites and, through a rich pharmacopeic tradition stretching back to pre-Galenic Alexandrian physicians, gave him hope to conquer ailments and live. The esteem in which these products were held was reflected in the high market prices they commanded ('cher comme poivre' as an old French proverbial saying went - a German price table from the fourteenth century sets the value of a pound of nutmeg at seven fat oxen), out of which much followed in the realm of collective political action. As the Portuguese pharmacist and ambassador Tomé Pires reflected philosophically: 'The trade is of such importance that the world could not otherwise sustain itself; it ennobles cities and kingdoms and makes men; it decides upon the destiny of war and peace in the world'.² Thus, spices proved ransom enough for Alaric the Visigoth to raise the siege of Rome in 408 A.D. or the grail of determined Portuguese navigators a thousand years later to seek them out over uncharted oceans. For there are few clearer enunciations of purpose than da Gama's first man ashore at Calicut on May 21, 1498 who, on being asked what was his business, answered 'Christians and spices'.³

Spices, then, were one of the principal motivating factors of the early modern European enterprise we call the Discoveries, and indeed European expansion more generally into the wider world, ever since the Hellenistic imagination had once been inspired by the wonders of the natural world encountered by Alexander the Great's troops on their lengthy campaigns in the East. For if, on that occasion, the talk had been enough to instigate the first systematic Eurasian trade, then two thousand years later the Pilgrims, amongst the first firm European arrivals on the North American continent, combed the Plymouth thickets assiduously, notwithstanding their terror that the wild beasts they heard might be 'lions', for

¹ Albert DEMAN, 'De Muziris à la Via Biberatica', in *C.G.E.R.*, 133.

² 'O qual trato é tam necessário que sem ele se non susteria o mundo; este é que nobreçe os Regnos, que fax grandes as gentes e nobelita as cidades, e o que faz a guerra e a paz no mundo', T. PIRES, *Suma Oriental*, vol. II, 325.

³ Alvaro VELHO, *Roteiro da Primeira Viagem de Vasco da Gama*, ed. Neves Águas, Lisbon (1987), 54-5.

objects of the same name.⁴

What were they, those objects which so inspired European man in such a multiplicity of ways over such a course of human history? It is difficult to imagine from the perspective of today, for the term 'spices' has shrunk to mean little more than the vegetal seasonings and culinary flavourings of tropical origin which we use to adorn our meals.⁵ So that Martin Booth, in assessing today the role of nutmeg in the contretemps that raged between the Dutch and the British in the East Indies during the sixteenth and seventeenth centuries, concludes that this was a conflict 'fought over surely the most bizarre commodity'.⁶

There are a number of different issues that lie behind Booth's bewilderment. The functional ascription of these commodities (let alone the value of those functions to the society in question) has changed repeatedly along with, and in association with the contents of the semantic category 'spices'. It is simply not persuasive to project our current understanding of the term 'spice' into the past as Franco Brunello has done, justifying Marco Polo's inclusion of what to our ears would stand as a strange assemblage of goods under the rubric spices on the grounds that it is a slip.⁷ It might be worthwhile then to begin this thesis with an investigation of the trajectory of the term itself, clearly so problematic.

In origin, the denotation *spices* meant almost nothing; it stems from the Latin *species*, a generic term meaning 'substance' or 'sort', which in turn was a conceptual adoption of the Greek equivalent *eidos* ('form'), which had come to designate goods, that is merchandise, during the imperial era. Colloquially, *species* came to mean a commodity of particular value or distinction typically imported from abroad; we find the term as the title of a long list of products subject to customs in Roman Alexandria during the second century and incorporated into the *Digest* of Justinian.⁸ These products were of all sorts, but oriented particularly towards the raw ingredients employed in medicine, in perfumery and cooking, and as specific

⁴ 'A relation or Journall of a plantation settled at Plimoth in New England, and proceedings thereof; printed 1622, and here abbreviated', in Samuel PURCHAS, *Hakluytus Posthumus or Purchas his Pilgrimes Contayning a History of the World in Sea Voyages and Lande Travells by Englishmen & others*. Glasgow, (1905-07) vol. XIX, 315.

⁵ "Substance d'origine végétale, aromatique ou piquante, servant à l'assaisonnement des mets", *Le Grand Robert*; 'Seasonings', *Market Intelligence*, (1996).

⁶ Martin BOOTH, 'All for the sake of a little nutmeg tree', *The Sunday Times*, 28 February 1999, 8/6, column b.

⁷ 'in qualche passo del Milione troveremo compresi sotto la stessa denominazione generica prodotti appartenenti a categorie merceologiche differenti', Franco BRUNELLO, *Marco Polo e le merci dell' Oriente*, Vicenza (1986), 33.

⁸ *Cod. Just.* 1.2.10 (of *vendenda sine specie sine pice*, Palladius October 14, 3).
Halikowski-Smith, Stefan (2001), Portugal and the European spice trade, *Journal of Economic Surveys* 15(4), 589-609.

components in arts and crafts. Given the continuity of many of the elevated tastes and rituals of civilized life from ancient Rome right through to Renaissance Europe, as historians like Friedländer have emphasised, we have here a broader definition of spices: as imported luxuries or fripperies invested with the exotic. It is to this expansive definition that Braudel turns, when he urges us to consider the brilliant history of spices in the light of Gaston Bachelard's proposition that luxury instils greater spiritual excitement than the attainment of necessities.⁹

Now, if there is clearly a semantic continuum between the Latin *species* and the spices, *especiarias*, *spezierie* or *épices* of a number of European languages today, the contents of that group have nevertheless changed according to the uses of language and the cultural priorities of the intervening ages. I have reproduced three samples of product contents of the generic 'spice' over the broad historical span of that word's existence: the Alexandrian duties' list just mentioned (Appendix 6); the 286 entries in the great fourteenth century handbook of trade *La pratica della mercatura*, regardless of quite how idealised a view of trade it constitutes, compiled by Francesco di Balducci Pegalotti (Appendix 7); and the contents of a twentieth century housekeeping manual, *The Essential Guide to Spices*, published under the auspices of the BBC in 1996 (Appendix 9). I have, moreover, provided not just a list, but a summary encyclopaedia of commodities that were from the primary texts that have been consulted still, in the largest sense, considered spices in the sixteenth century (Appendix 8).

We have already hinted at the shift from the Roman definition, a loose and variegated category indicating trade goods from the Orient infused with the connotation of luxury or good living, to that of today, a small and more specific grouping of aromatic vegetal products that figure incidentally in our lives as flavourings. With the ascription of a strong sense of function to the term - here flavourings - we have lost spices as a loose set of objects that once included wild beasts, slaves and eunuchs, but we have also lost coherent collective practices focused around these same products. We have lost spices as accompaniments to ritual, spices as perfumes, cloths, dyes, precious stones and minerals and, overridingly, as the classical pharmacopeia inherited from Theophrastus and Dioscorides. We have also largely lost, for different reasons, the mental association linking spices with the Orient; indeed, one might argue from a glance at *The Essential Guide to Spices* or the definition supplied by the First International Congress for the Repression of Fraud, that spices are no longer contingent upon

⁹ L. FRIEDLÄNDER. *Roman Life and Manners under the Early Empire*, (1908), 158; Fernand BRAUDEL. *Capitalism and Material Life*, 122. Manó he concludes 'is a creature of desire rather than of need'.
Halkio, WSK, Smith, Stefan (2004), Portugal and the European spice trade, 1480-1980

provenance at all.¹⁰

I think it was in the early modern period that the pivot engineering the principal shift of meaning came to bear. If the notion of spices as a loose set of natural products imported into Europe from the wider world, designated the Orient, was still present, as we shall see, it was complicated over the course of the sixteenth century in the wake of the systematic process of geographical exploration known as the Discoveries. World trade, actively carried out by Europeans snowballed; with Iberic, followed shortly after by North European expansion, each nation - Dutch, English, French - sought to reinforce, through commercial activity, its political presence in its various overseas colonies. Given this new configuration of the world, the term of reference for the loose generic moved towards the more specific new linguistic formula *colonial goods*, *Kolonialwaren* or *towary kolonialne*.

It is interesting to chart to whom these goods passed on in domestic European markets. For if the French *épiciers* has survived unto this day, in England - always a land of commerce - the rise of world trade was accompanied by the rise of the grocer, ironically a Middle French denomination, *grossier* implying a wholesale merchant, for whom domestic and imported produce was all the same. In Germany, the sale of spices was spread across the *Kramerinnung*, which refers simply to the mixed nature of the goods they were responsible for selling ('kramen' means to rummage); across Eastern Europe, such as in Poland, the German terminology held sway (*kramarstwo*).

At the same time, those products that had traditionally been traded as spices were assailed, in part by the division of the oriental trading world between the Portuguese line of trade with the Indies and the Far East and the traditional Venetian and Mediterranean trade with the Levant. These latter - typically raisins, figs, sugar, nuts, cloth and certain dyes - came increasingly to be designated Levantine goods or *res turcales*. In much the same way, honey from Lithuania and Russia, Baltic herring and amber, northern pelts, even feathers and horsehair of Bohemia, all of which were brought to the Mediterranean market by Nuremberg merchants like the Imhoff and the Behaim, were designated 'spices of the north' (*Gewürze des Nordens*'). But ultimately, at the same time as there was a trend to greater geographical specification, the degree to which plants were transplanted from one corner of the world to another has mitigated against the persistence of a strong association between spices and the Orient.

However, it is interesting to note that the natural products exposed with the discovery

¹⁰ see discussion on page 12 and, as a corollary to the confusion between herbs and spices, page 13. The First International Congress for the Repression of Fraud, Geneva (1908) defined spices as 'vegetal substances, of indigenous or exotic origin, Portugal and the European Spice Trade, *Spices*.. (1993), §2.2.
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of the New World in 1492, and soon wedded to the European pharmacopeia and integrated into its patrimony of cultural practices, 'hedonistic' products such as tobacco and cocoa, but also medicinal wonders such as the cathartic Jalap root, the chenopod, curare, ipecac, sassafras etc. were never referred to as spices.¹¹ Spices, in other words, would seem already to have become a closed group of products. The geographical provenance of many of these new finds - even if, as we have hinted, a variable largely redundant today - must in part be held responsible. Diderot, in 1755, reminds us that spices were restricted to 'les drogues orientales'.¹²

But Diderot's play between drugs and spices forces us to consider a more pronounced feature of linguistic evolution as far as the categorization of products is concerned, which is by functional differentiation. Here, as I shall show in a minute, spices could be broken down into three or four principal groupings inherited from Roman times. And, in order to appreciate the evolution of the notion of spice, it makes sense to investigate how these groups, or domains, evolved over time and how their subordination to a wider denominational collectivity, such as spices, slackened.

1.1. Spices as 'pharmacia'.

One might begin, most importantly, with spices' associations with the classical pharmacopeia. Carmélia Opsomer has pointed out how the Greek pharmacopeia had indeed started out as *eidè iatrika*, a subset of the more generic root group of spices *eidōs*, and more coherently composed of a number of vegetal, mineral and animal substances largely imported from the Near East. The Galenic treatise *De Simplicibus*, one of the foundations of western therapeutic knowledge, was known as *peri eidōn* until a late date, and it was from these origins that we are to understand the conceptual congruity between spices and medicinal *simples* - the common reference to *espices medicinaus* - that we find throughout the Middle Ages.¹³

By the sixteenth century, this parallelism was crumbling. It is true that Columbus reported back from his first voyage on 'trees of a thousand types. . . [surely] of great value in Spain for dyes and as medicinal spices' (*para tinturas y para medicinas de especiarya*), and, at a derivative level, Leonardo Fioravanti could still, in 1561, refer to the Venetian pharmacy dell'Orso as a *speciaria*, supervised as it was by the Collegio degli Speciali.¹⁴ But Garcia de

¹¹ see Francisco GUERRA, 'Medical Colonization of the New World', in *Medical History* (1963), 147-155.

¹² DIDEROT, *Encyclopédie* (1755), 'épices'.

¹³ C. OPSOMER, 'La Pharmacie du Paradis', in *C.G.E.R.*, (1993), 43.

¹⁴ COLUMBUS, 'Diario de abordo', in PEREZ DE TUDELA, Juan et al. *Colección documental del descubrimiento* (1492-1506), Madrid: Real Academia de la Historia (1994), 480-1599.
Halikovsky-Smith, Stefan (2001) Portugal and the European spice trade, 1480-1599. The Journal of Christopher European University Institute DOI: 10.2870/92585

Orta, the ground-breaking Portuguese botanist-physician, stated his goal in 1563 as that of knowing the home-made remedies (*mezinhas*) of India and all the *simples* there, while the Spanish physician Francisco Hernández, was sent forth by Philip II into the New World with the task of obtaining 'an account of all medical herbs, trees, plants and seeds'.¹⁵

If we take a longer term perspective, we can see that the term 'drugs' gradually emerged as winner from these semantic wars for a reference term to medicinals. Tomé Pires was nominated the King's *feitor das drogarias* and informed his patron in 1516 'About the drugs and where they grow'.¹⁶ Similarly, Orta's Spanish contemporary, Christóval Acosta, wrote a treatise on the drugs (*drogas*) and medicines (*medicinas*) of the East Indies, while Bartholomew Gosnold vaunted his cargo of sassafras fresh from Cuttyhunk in 1602 as 'a potent drug and a sovereign remedy'.¹⁷ Elsewhere, Gerhard Fischer has noted the rise of a new class of spice trader in Leipzig from around 1550, the *Materwarenhändler* (or 'Materialisten' for short), one that swept away the existing trade guilds (*Kramerinnung*).¹⁸

If the etymological origins of the term drug is still unclear, if emergent as Aline Durel contends in the mid-fifteenth century, they grew out of the Roman science of *materiallia*, which concocted compound medications traditionally in a liqueous form.¹⁹ This was still very much the core meaning in early modern times - drug as *medicatio potio*, 'a medicinale drinke, a potion' - at the time of Thomas Thomas' *Dictionarium Linguae Latinae et Anglicanae* (1587). Drugs, however, were acquiring ever more universal meaning as medicinals, perhaps given the tendency towards compound medication, though the term, as used by Gosnold, referred to a *simpulum*, not even a liquid, but a dried bark. Drugs were even assuming some of the generalised

Columbus, ed. & trans. Cecil Jane, New York (1989), 38, 40. Note how badly *medicinas de especearya* gets translated by Jane into English ('for dyes, and for medicines or spicery') which reveals historians' characteristic blindness to conceive of spices principally as medicaments); FIORAVANTI, *Capricci medicinali* (1561), fol. 2v.

¹⁵ Garcia d'ORTA, *Coloquios dos simples, e drogas he cousas mediçinais da India..* Goa (1563); HERNÁNDEZ, cited in 'New and Old Worlds', D.L. COWEN & W.H. HELFAND, in *Pharmacy. An Illustrated History*, New York (1990). Hernández's life work has been recently reviewed in Simon VAREY, Rafael CHABRÁN & Dora B. WEINER eds., *Searching for the Secrets of Nature. The Life and Works of Dr. Francisco Hernández*, Stanford (2000).

¹⁶ letter reproduced as an appendix to *The Suma Oriental*, ed. Armando Cortesão, Hakluyt Society 2nd series, no. LXXXIX, London, (1944).

¹⁷ PIRES, letter to Dom Manuel, Cochim, 27 January, 1516, A.N.T.T., *Corpo Cronológico*, parte 1a, maço 19, doc. 102; Christóval ACOSTA, *Tractado de las drogas, y medicinas de las Indias Orientales..*, Burgos (1578); Gosnold's colonial venture to Massachusetts is charted in Warner F. GOOKIN & Philip L. BARBOUR, *Bartholomew Gosnold*, Archon Books, (1963).

¹⁸ Gerhard FISCHER, *Aus zwei Jahrhunderten Leipziger Handelsgeschichte*, Leipzig (1929), 212.

¹⁹ Aline DUREL, *L'Imaginaire des Épices*, Chapitre 6, Ph.D. thesis in progress, E.U.I. Fiesole (2001).

applications previously covered by spices. Complaints were voiced by the Genoese in 1558 regarding the excessive priced of 'drugs' from Portugal, while Montaigne could write that the meats of Charles V were stuffed with odorific drugs ('on farcissoit ses viandes de drogues odoriferantes').²⁰ The 1706 edition of the Richelet dictionary added, by way of definition, that drugs were said to be all sort of spicery provenant from far-away lands, just as it was merchandise for dyeing and artisans ('Il se dit de toute sorte de marchandises d'épicerie qui viennent des país éloignez, comme sont encore toutes celles qui servent à la teinture et à divers Artisans'). Conversely, the ambiguity over the term *pigmentum*, both artist's raw material and physician's drug, is confirmed from a number of quarters, including the interest and experimentation on the part of the seventeenth century physicians Simon Forman and Richard Haydocke.²¹

What was happening is that spices were gradually becoming a sub-set of drugs, whereas previously it had been the reverse. This process, by which spices were substituted by drugs, can be detected in the distinction endowed the two terms as professional denotatives in the sixteenth century *rescritto* of the Venetian Council of Ten, which separated the competences of the *speziali*, medicine sellers, from the *droghieri*, who were determined wholesale *speziali* ('de grosso'), suggesting a certain economic advantage.²² Part of the semantic problem seems to have been that the connotation of imported luxury associated with spices no longer matched the fact that *simples* came ever more to be constituted of indigenous plant remedies. What happened is that spices were subsequently reduced to a specific category (*De Specibus*) of compound medicines or *compositae*, alongside *rotulae* (literally, rolls), salts (*salia*), pills (*pilulae*), unguents (*olea expressa*), essences (*essentiae*) etc.²³ In the London Pharmacopeia of 1650, spices were paired with powders (*Species sive Pulveres*) - this seems simply to have united a sub-grouping of *Pulveres Species Composit* that we can find in a number of other dispensatories.

What was the basis underlying this reformulation? Cri_an is unconvincing: she suggests *species* were henceforth certain drugs belonging to the category of *ingredientia simplici*, fairly simple preparations that were thus denominated because they were amongst the most popular of

²⁰ R. di TUCCI, *Relazioni*, in *Miscellanea Storica*, Genova: Soc. Ligure di storia della patria, (1935), 639.

²¹ R.D. HARLEY, *Pigments c.1600-1835*, 2 ed., 8.

²² *Per una Storia della farmacia e del farmacista in Italia. Venezia e Veneto*, 9.

²³ Drugs, according to BARTEL's definition, would appear to have directly usurped the kind of loose, eclectic definition once ascribed spices: 'Drogen sind trockene oder getrocknete Rohstoffe (wenig zubereitete Naturstoffe) hauptsächlich aus dem Pflanzenreiche, daneben aus dem Tier- und Mineralreiche. Sie werden vorwiegend in Medizin und Technik verwendet.' *Drogen und Drogenhandel in der Europäischen Geschichte*, 158 (1966), Chapter 1.

the period.²⁴ I would suggest, rather, that *species* were traditional compound recipes that consisted of those few vegetal products from the Orient which conformed to the new, emerging notion of spices as aromatics. This would seem to be hinted at from the Cordian dispensatories of the late sixteenth century, which omitted *De Speciebus*, but classified many of the same recipes such as Dianiso di Mesue under the heading *Elettvarii overo Confettioni Aromatiche*.²⁵

In any case, the notion of spices lingered on in Galenic compound pharmacy, even if henceforth the times were for 'galenicals' of mixed vegetal drugs, or 'spagyrics', those chemical and mineral remedies proposed by Paracelsus and his followers, depending on one's stance in the debate between the Ancients and the Moderns.²⁶ Erudite dictionaries such as Furetière's *Dictionnaire universel* (1690) recall the wider sense of spices as 'drogues medicinales qui viennent d'Orient, le sené, la casse etc.', while, if the London pharmacopeias of the seventeenth and eighteenth centuries omitted them as a category, *species* continued to figure strongly as a specific group of compound medicines in official pharmacopeia and pharmacy inventories further east, such as the *Pharmacopoea Austriacoprovincialis* (1774), or the inventory of Tîrgu Mures made in 1789, in which a healthy 19 recipes still figure under the rubric *species*.²⁷ But it would be true to say that the associations spices continued to evoke as far as western medical practice was concerned suffered a blow with the disappearance of the *speziali* as official dispensers of medicinals to the public, who ceded to a group that had previously operated from within the Collegio degli *speziali*, the *farmacisti* which we still recognise today or, in England, the chemists, who crept into the limelight in the wake of the Paracelsian revolution.²⁸ Spices were henceforth typically a category (*Spezerey*) - alongside *pigmenta* (*Farbwaren*) and *Material* (popular remedies from the Latin *materiallia*) - more commonly marketed in 'grocery stores' given over to colonial goods such as in the 'To the White Elephant' store ran by the father of the eminent nineteenth century physician Ignác Semmelweis in Buda in 1823.²⁹ However, as I hope to demonstrate later, the collective association between spices and therapeutics was only

²⁴ CRI_AN, *Materia Medica*. (1996), 33.

²⁵ *Il Dispensario di Valerio Cordo...*, Venezia (1590).

²⁶ see, for example, J. Rud. GLAUBER, *Pharmacopoea spagyrica. Parts 1-3*, Amsterdam (1654-57).

²⁷ Antoine FURETIÈRE, *Dictionnaire universel*, 3 vols., La Haye & Rotterdam (1690), repr. Paris: SNL - Le Robert (1978); as communicated via Eva CRI_AN, *Materia Medica*. (1996), 45.

²⁸ *Speziali aromataro e farmacisti in Sicilia. Convegno e mostra sulla storia della farmacia e del farmacista in Sicilia dal secolo XIII al secolo XIX*, Palermo (1990).

²⁹ *Orvostörténeti közlemények (Communicationes de Historia Artis Medicinae)*, Supplementum 5, ed. József Antall, Budapest (1972), 69.

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definitively broken with the breakthroughs in chemical medicine in the nineteenth century, and which fundamentally re-oriented pharmacological research to a scale of investigation well beneath that of the individual plant, dealing rather with synthetic essences and phyto-chemical extracts.

1.2. Spices as 'aromata'.

Spices, meanwhile, were losing ground elsewhere as a generic grouping. An English state paper of 1575 styled the potential 'traffycke' to be conducted from Persia through Russia as 'jewells, spyces, silks, drowges, gawles, allam and other marchandise'.³⁰ In 1621, the contemporary economist, Thomas Mun, estimated that around two-thirds of the incoming cargoes of the East India Company was constituted of spicery, while the remaining third was distinguished by indigo and additional dyestuffs.³¹ Spices were no longer a catch-all but merely one of a number of more specific parallel groupings. What were the new criteria to which the group was being reformulated?

What we can observe is that spices were being gradually whittled down in terms of meaning to specify aromatics, to the point that the two terms became interchangeable. Commercial records start to replace *species* with reference to *merces* or *res aromatica*. Pope Alexander's papal bull of May 4, 1493, makes no mention of spices, but announces the lands of the Orient as a source of 'aromata et alias quamplurimae res pretiosae diversi generis'.³² A state document of 1506 speaks of the trip to the Indies 'ad piper aliaque aromata inde', which is mirrored in a speech made to the English Queen by the Portuguese ambassador in 1568, which made mention of pepper, cloves and cassia alongside 'aliacq_ aromatica diuersi generis'.³³

Meanwhile, the guild of what we would understand today as pharmacists, then known in Italy as *speziali*, was increasingly qualified to that of *speziali aromatari*.³⁴ The two terms also

³⁰ reproduced in HAKLUYT, *Russia at the Close of the Sixteenth Century, comprising the Treatise 'Of the Russe Common Wealth' by Dr. Giles Fletcher and 'The Travels of Sir Jerome Horsey Knt.'*, xi.

³¹ cited by Ephraim LIPSON, 'The Age of Mercantilism', vol. II of *The Economic History of England*, London (1947), 288.

³² Bula de Alexandre VI, *Inter Caetera*, May 3, 1493, in SILVA MARQUES, *Descobrimientos Portugueses*, #253, lines 28/29, vol. 3, 375.

³³ 'De mittendis in Indiam', from the codex *Diversorum*, 1505-06, X. 1103 Arch. Governativo, 18 June 1506; Discurso em latim, que o Embaixador portuguez Manuel Alvares, dirigiú á Rainha de Inglaterra, no dia 24 de abril de 1568..', Cotton, Nero, B. I. fol. 160.

³⁴ *Speziali aromatari e farmacisti in Sicilia. Convegno e mostra sulla storia della farmacia e del farmacista in Sicilia dal secolo XIII al secolo XIX*, 29 sett. - 13 ott. 1990, Palermo (1990).
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appear next to each other in a 'Lijste der aromatique specien' from 1670 in the Stadsarchief, Antwerp.³⁵

Aromatics became a stock phrase within botanical discourse. Juan Fragoso, physician to Philip II, was perhaps the first, in 1572, to entitle his book *Discursos de las cosas aromaticas arboles y frutales, y de otras muchas medicinas simples que se traen de la India Oriental, y sirven al uso de medicina.* In Clusius' *Exoticorum Libri Decem.* (1605), spices constituted a sub-grouping of *Aromatum aliorumque peregrinorum Fructuum*. But it took a long time for this convention to establish itself. Diderot's definition of spices in 1755 - 'the generic name for all oriental drugs and aromatics' (*le nom en générale à toutes les drogues orientales et aromatiques*) - still straddles the older formulation, as a kind of sum generic, and the new, the articulation of the contents of the category in terms of drugs and aromatics.³⁶

Aromatics had their own strong and lengthy tradition going back to Greek times, as we shall see, both as *arôma*, an aesthetic pleasure and, as tabulated by Hippocrates, of therapeutic value, and *thyos*, a gift burnt for the sake of the Gods. But aromas were a sector in which both their practical uses and man's tastes were changing decisively in the early modern period, with the implication that the connotation of spice itself underwent fierce change. Preferences in favoured aromas shifted from musk, civet and ambergris to lighter floral fragrances: rose, lavender and, in northern Europe, pine. It was on the basis of such changes that the centre of modern perfumery gravitated towards the French Riviera from the latter part of the eighteenth century, a natural capital for the cultivation of flowers for perfume oils. The products that had for a long time been considered spices, then, had already receded markedly from European olfactory horizons by the nineteenth century, when the perfume industry took advantage of the rapid development of organic chemistry to isolate the odorific chemical blueprints and duplicate them synthetically. It was the development of organic chemistry, too, and specifically the discovery of the microbe, that helped to debunk the notion of epidemic as a product of mephitic odours or miasma, and with that, the notion of aromatics as effective antidote. In any case, we are urged to subsume both sets of developments within the slowly evolving preference for ever less pronounced tastes and smells, which has widely been interpreted as a devaluation of the sense itself, the atrophy of smell in the face of the civilised and reasoned medium of sight. At the limit, to be odourless has become preferable to being odourised.³⁷

³⁵ #4266 [Meerschen. Apothekers], Geb. st. 1499-1794, in *Inventaris op het Archieffinds van Handel en Scheepvaart*, Antwerp (1925), 71.

³⁶ DIDEROT, *Encyclopédie*, (1755).

³⁷ CLASSEN, D. HOWES & A. SYNNOTT, *Aroma. The Cultural History of Smell*, London: Routledge, (1994).
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1.3. Spices as 'pigmenta'.

The reformulation of spices as a tighter group of aromatic substances decoupled the elements of that former group that were considered under the sub-grouping *pigmenta*. As we have seen from Thomas Mun, dyestuffs and spicery were already independent of each other by 1621. *Pigmenta*, then, if immediately subsumed, as attested by Richelet and others, into the larger collective drugs, constituted the first, and cleanest denotative rupture in the history of the meaning of the term spice.

1.4. Spices as 'condimenta'.

Thus, by the rules of our own working definition, we are left with one final constitutive domain of what was once implied by spices, that of spices as *condimenta*, for aromatics had been strongly present in the western tradition of culinary art since Apicius' *De re coquinaria*. If we started our exegesis in the realm of the medicinal for its importance in peoples' lives, we cannot deny that it was in the culinary domain that spices have retained their principal voice, as we can gauge from contemporary usage of the term. How can this be explained? Perhaps the point to make is that despite heavy setbacks which shall be charted in Chapter 10, both at the hands of the new taste emanating from the French during the seventeenth and eighteenth centuries and the chemical revolution of the nineteenth century, spices, at least the major ones, never disappeared fully off the horizons of western taste, as they did in popular estimation at some point as far as the olfactory, the pigmentary and the medicinal universe is concerned.

Today, revived by the interest in ethnic cuisine and buoyed up by the current trend towards natural sources of food flavouring (as enshrined, for example, in the Council of Europe's 'Categories of Naturalness'), the term has more generally shed the negative connotations it has been burdened with in the past.³⁸ If spicy implied "problematic and open to various interpretations" in the late sixteenth century, "over expensive" in the seventeenth century, "caustic, or mordant" in the eighteenth and "bawdy" in the nineteenth, its prospects have never been better than the present moment, boosted by the world-wide popular music

to Darwin's postulate that humans have steadily lost their acuity of smell in the long process of evolving from animals, 84 ff. Recent genetic research has suggested that over the past 10 million years, humans have lost over half of the thousand olfactory genes their ancestors possessed, 'Genome', *International Herald Tribune*, February 12, 2001, 3.

It would be unfair to suggest that spices have entirely disappeared from the world of smell. 'Spicy' is still frequently a general category in the descriptive classification of scent (see section 10.6. 'Long-term changing market demand in early modern Europe').

³⁸ 'Categories of Naturalness' as applicable in EC Regulation No. 2232/96 of the European Parliament and of the Council of 28 October 1996, Article 3(1) (2001), Portugal and the European spice trade, 1480-1580

sensation *The Spice Girls*, and a clutch of imitations such as *All Spice* and *Spice It Up*, through whom the term may offer once again wider, more expansive, positive meanings.³⁹

Having charted the conceptual evolution of spice in the European tradition, we turn to the constituents of the group as it would have been understood in the sixteenth century. And here, as we have hinted, the looser, Roman treatment of this word that we find reconstituted most dazzlingly in Pegalotti had not been fully left behind, as we can ascertain from numerous trading reports of the fifteenth and sixteenth centuries, pharmacy inventories, and texts such as *Il libro delle senserie* of the Florentine *sensale* (a commercial middleman in the spice trade), Girolamo di Agostino Maringhi.⁴⁰ Spices here span products from the three natural kingdoms (mineral, animal, vegetal) as diverse and esoteric as borax, a borate of soda extracted from certain Tibetan lakes and used as a *tincal* or flux in goldworking and other metal trades, red coral, camel's dung (*terra di cammello*), from which alchemists extracted sal ammoniac, and mummy (*munmia*), a condensed exhumation from cadavers preserved in the Arab world with aloe, myrrh and balsam. But spices also embraced what we would be tempted to describe as banal foodstuffs like salt, rice, figs and almonds, which together with heavy mineral products for dyeing, were considered *groben Waren*, or coarse goods. Although such goods were not imported from the Orient but often came up from the Mediterranean basin, perhaps it was the mere fact that many of them were re-exported together with spices from Venice that classified them as spices.⁴¹ In a number of cases, we can affirm that the spices of pre-modern times were not even real, but purely oniric constructions such as the horn of the unicorn or antelope's tears, while others were given figurative ascriptions such as dragon's blood (*sangue di dragone*), which was in fact a gum resin from a number of species of the *Dracaena* family of palms indigenous to south-east Asia.⁴²

This never static and wide-ranging group of meanings gives rise to a formal problem, as we have pointed out, with the delineation of the object area under investigation. Even if we

³⁹ André GOOSSE, 'Des mots épicés', *C.G.E.R.*, 36-37 and, specifically for the sixteenth century connotation, the explanatory note following the title page of Tessa STOREY, '*Questo negozio è aromatchissimo*'. *A sociocultural study of prostitution in early modern Rome*, PhD thesis European University Institute, April 1999.

⁴⁰ *Il libro delle senserie di Girolamo di Agostino Maringhi sensale dell'Arte degli Speciali. 1483-9*, ed. Antonella Astorri, tesi depositata nella Facoltà di Lettere, Firenze (1987); for the full bibliography of fifteenth and sixteenth century texts referred to, see the introduction to §15 'A List of sources and literature cited in the text'.

⁴¹ see, for example, Francesco di Balducci PEGALOTTI, *La Pratica della Mercatura*, ed. (1936), Appendix 7.

⁴² Pierre BELON, *Les observations de plusieurs singularitez & choses memorables, trouuées en Grece, Asie, Iudée, Egypte, Arabie, & autres pays estranges, redigués en trois liures par Pierre Belon du Mans*, Antwerp (1555), 158 v°.

were to reduce the target of our research to the largest group of constituents being products of vegetal origin, and subtract sub-categories such as the so-called *groben Waren*, there is no forthcoming botanical definition, neither an affinity within the natural orders, nor a physical one, as spices encompass buds of trees such as cloves, seeds from creepers such as pepper, bark like cinnamon or rhizomes like ginger. Nor is there any common ground as far as chemical constituents or physiological effects from consumption are concerned, though many are alkaloids and have the properties of a stimulant or, according to the schema of Galenic humoral ascription, were generally hot and dry. Spices' applications were manifold, but for the most part served as condiments, masticatories, preservatives, medicines, anaesthetics, perfumes and unguents, or dyes. Nor did they stem exclusively from one given region, though apart from saffron, of which certain species were cultivated in Spain, southern Italy and as far north as England, the designation traditionally carried with it a denotation of provenance from the Orient. The Orient, however, was a much larger, amorphous conception in the medieval mind than what it came to mean once the world had been reduced to the dimensions of Euclidean space in the wake of the Discoveries, a world constructed primarily of continents. Thus African spices such as *pimenta de rabo* and malagueta, which had traditionally made their way up from the tropics through the Sahara to the Libyan port of Tripoli, sufficiently shared Arab commercial mediation to gain access to a connotation of the Orient.⁴³

Spices were not a unitary group, nor were they traded as such. Commercial texts refer to *specie grosse* and *specie menude* or, as was the equivalent in the German language, *groben* and *kleinen cryde*. This distinction owes itself to the fact that only a few spices, such as pepper and saffron, were of sufficient value, or transported in sufficient quantities, to merit individual packing. Otherwise, the remaining spices were bundled together according to their constitution and respective weight. A weight of the finer spices or *specie grosse* was typically considered at least two times the value of a corresponding weight of *specie menude*, commonly alum, saltpetre, aniseed, figs, capers, molasses etc. Such a distinction had no bearing on the type of balance used in early modern Europe, commonly a large and small one (*das große und kleine Gewicht*), for in any case spices were weighed on the small as Paxi informs us ('se vendano ala subtile.. tutte sorte le specie si grosse come menude'); though complications arose from the use of Troy weights, typically reserved for coinage, for the weighing of saffron, which was later extended for general use in compounding and dispensing medicine by the London College of Physicians in 1618. Troy weights differed from the avoirdupois measurement by having twelve

⁴³ see G. di BARROS, *L'Asia del S. Giovanni di B., consigliere del Christianissimo Re di Portogallo: de' fatti de' Portoghesi nello scoprimento, & conquista de' mari & terre di Oriente.* .. Venezia: Appresso Vincenzo Valgrisio, (1561), 33
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rather than sixteen ounces to the pound.⁴⁴

The relationship between spices and herbs is often an interlapping one. The accounts regarding the annual festivities of the Louvain corporation of fat sellers (*vendeurs de gras*) between 1541-61 mention *épices vertes*, which, given their price, cannot be other than local herbs used as flavourings.⁴⁵ With the trend towards a strictly vegetal definition of spice and their botanical demystification, spices were gradually assimilated with herbs, to the point that they were first annexed and then subsumed to some extent within the early modern encyclopaedic tradition of herbaria, compendiums of physical descriptions and illustrations of the plant world complete with indications as to the habitat, time of collection, therapeutic properties and practical uses to man. So that today, herbs and spices stand alongside one another on an equal footing as 'aromatic plants used in cooking', with the distinction being primarily geographic - spices are still to this day treated as provenant from tropical and sub-tropical regions overseas, whereas herbs are indigenous, even if that on occasion be as far afield as the Mediterranean. This would appear to amount to the distinction employed by J.W.P. in the *Encyclopedia Britannica* entry for 'Spices, Herbs and Flavourings'. Other sources, including specialised cooking books on the subject, do not appear to be quite so rigorous - *The Essential Guide to Spices* (1996) is happy to include a whole string of Mediterranean herbs such as sumac and nigella under spices, alongside such domestic favourites as celery seeds.⁴⁶ Here, the operative distinction between spices and herbs might be that seeds, as spices, are products of rather than the herbal material itself; this would seem to follow the line laid down by authorities such as Kybal and Kaplicka or Simonetti. Once again, however, one comes up against the limits and arbitrariness of such a definition. *The Oxford Paperback Dictionary* (1988), for example, chooses to define a herb as a 'soft-stemmed plant. . with leaves or seeds etc.' And Esselunga S.p.A., the largest supermarket shopping chain in Italy, insists on marketing dried oregano leaves as 'spices' (*spezie*).⁴⁷ There is, however, a third course open to pursuit, that adopted by authorities such as the *Meyers Enzyklopädisches Lexicon*, which would prefer not to make any distinction between herb and spice, but rather unite them under the common rubric

⁴⁴ Bartholomeo di PAXI, *Tariffa de pexi e mesure correspondenti al Levante dal Ponente*, Venice (1503), fol. 2b f; W.H. BEVERIDGE, *Prices and wages in England from the Twelfth to the Nineteenth Century*, 75; Ronald ZUPKO, 'Medieval Apothecary Weights and Measures: the Principal Units of England and France', in *Pharmacy in History*, 32, (1990).

⁴⁵ cited by Raymond VAN UYTVEN, 'Herbes et Épices dans les villes des Pays-Bas du Sud', in *C.G.E.R.*, 87.

⁴⁶ KYBAL & KAPLICKA, *Herbs and Spices*, Magna (UK), (1995) and SIMONETTI, *S & S Guide to herbs and spices*, Australia (1991).

⁴⁷ see receipt labelling for product number 8004 3423, May 2001.
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Gewürzkräuter.

Given that tastes and ways of validating objects have changed over the centuries, and that modern definitions try hard to specify, any such definition will not encompass the sheer range of applications of what were once considered spices, nor their cross-use. J.E. Mendes Ferrão, for instance, tries to distinguish spices (pepper, chilli-pepper, cinnamon etc.) from condiments (mustard, salt, vinegar etc.) from aromatics (clove, basil, vanilla etc.).⁴⁸ In the context of this specific historical enquiry, it seems more useful to limit oneself to a looser working categorisation roughly structured around function, such as the Romans adopted. As we shall hope to demonstrate, the reception of spices in early modern Europe was strongly shaped by the classical tradition. Thus we will be working within the following quadripartite classification: *aromata* (as a fragrance-giver to perfumes and ointments, and to which was merged *thumiamata* as the incense burned by sacred fires and *unguenta* as a scented oleaginous mixture commonly applied to the body); *condimenta* (as a flavouring for alimentary products, but also as objects of hedonistic consumption in their own right); *pharmacia* (for medicinal use as compounded into electuaries, elixirs, plasters, pills etc., together with the sub-category *theriaca* or poison antidotes); and *pigmenta*, or dyes.⁴⁹ We might compare this with the scheme elaborated by Bartels for early modern Europe:⁵⁰

⁴⁸ José E. Mendes FERRÃO, *Especiarias: cultura, tecnologia, comércio*, Lisbon (1993). This would appear to follow Pierre DELAVEAU, *Les Épices: Histoire, description et usage des différents épices, aromates et condiments*, Paris (1987) and GENOUVRIER, DÉSIKAT & HORDÉ, *Nouveau dictionnaire des synonymes*, (1977).

⁴⁹ J. Innes MILLER, *The Spice Trade of the Roman Empire*, Oxford (1969).

⁵⁰ BARTELS, 'Etymologie und Begriffbestimmung', ch. 1, §A of *Drogenhandel und Apothekerrechtliche Beziehungen*.
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Pharmacia	=	<i>Arzneidrogen:</i> (healing substances) (pharmaceutical agents [<i>Trägerstoffe</i>])
Condimenta	=	<i>Gewürzdrogen:</i> (pure spice-drugs [<i>Gewürzdrogen</i>]) (Lenten fare ['Fastenspeis'])
Aromata	=	⌈ Scents (<i>Parfümdrogen</i>)
(thumiamata & unguenta)	->	⌋ Fumigants (<i>Räucherdrogen</i>)
		<i>Technische Drogen:</i>
Pigmenta	->	(dyestuffs and pigments) (substances for tanning) (minerals)

By substituting spices for drugs as the generic, and particularly in separating *Gewürzdrogen* so absolutely from *Arzneidrogen*, Bartels seems to be moving a little ahead of semantic evolution. He provides, however, the useful category of *technische Drogen*, a rubric embracing raw industrial materials such as cotton, wax, glue, mastic and pitch, for which the Romans seem to have had no equivalent beyond the limits of *pigmenta*. Neither scheme provides a satisfactory distinction between the pharmaceutical applications of spices and their broader utility in public sanitation or health, such as food preservatives or as fumigants; in this, we are obliged to reduce *pharmacia* to its widest possible sense, the physical well-being of man, or, as I have tried to style it, 'the functional'. Nor do these two schemes we have presented go any way to constructing any kind of hierarchy of usage - they simply articulate the categories horizontally alongside one other.

I would not suggest that the part of my thesis devoted to demand deals with each facet comprehensively, indeed I would accept that I have tended to neglect the industrial applications of 'spices' within the manual arts. But I have done so with the aim of avoiding an exhausting survey of early modern technology and to sustain a central structuring contention: that *condimenta* and *aromata*, as indeed *pigmenta*, were in essence satellites of a dominant medical theory, which if not always established upon empirical example, had established some general consumptive rules for the objective world. These satellites, then, were functions rather than equals of *pharmacia*.

If I shall concentrate my attentions on the trade of spices as a generic, it is because it is often so difficult to arrive at individuation within the trade, or to split the group into more meaningful sub-groups. At the level of quantitative movements of products, however, Godinho has convincingly distinguished a set comprised of the six principal spices of Asia, 'les grandes épices classiques' - pepper, nutmeg, cloves, ginger, cinnamon and mace in that order - even within which there are considerable disparities of scale. It has been estimated, for example, that the pepper trade was more than sixty times the cinnamon trade's volume and value.⁵¹ Ginger, which remained Europe's second most popular spice, was never adequately represented in Portuguese returns, but continued to figure prominently in Venetian commercial accounts such as that of the Priuli family agent in Alexandria between 1509-11.⁵² The six spices we have named nonetheless conform to those spices Lorenz Meder instructed his German readers were to be bought from the Portuguese King, which is the historical angle from which this thesis is drawn, whilst also constituting the most popular spices consumed in Europe during the course of the sixteenth century and which, it should be added, have roughly kept their respective order of importance through to the present day.⁵³ These rankings are absolutely crucial in explaining the mainstream semantic evolution of the term spice in terms of vegetal products provenant from the tropics.

Our underlying interpretation of spice for the purposes of this thesis, then, if generalised, nevertheless anticipates this evolution. This necessarily self-imposed restriction means that areas of drama within quantitatively peripheral but technologically significant sectors of the spice trade such as dyestuffs, in which the traditional dried insect *kermes* and *grana* bases, which themselves had replaced domestic pigments such as madder and orchil, were rapidly superseded by the new opportunities offered by American cochineal and brazil wood, will be overlooked.⁵⁴ By way of compensation, I have attempted to compile as full a list of products as

⁵¹ GODINHO, *Os descobrimentos e a economia mundial*, (1982-7), II, 196; C.R. SILVA, 'The Portuguese Impact on the Production and Trade in Sri Lankan Cinnamon in Asia in the Sixteenth and Seventeenth Centuries', *Indica*, 26 (1-2), (1989), 25. GODINHO's precise calculations are that while pepper production reached 6640 metric tonnes during the first two decades of the sixteenth century, ginger hovered around 300, fine cinnamon 154, mace 105-126, nutmeg between 1259-1470 and cloves 1050-1469, *Os Descobrimentos...*, I, 487 ff. & 527-29 particularly.

⁵² Museo Correr, Venice. 6MS. Donà Tron PD C 911/II.

⁵³ Lorenz MEDER's *Handelsbuch*, Nürnberg (1557). Volumes of production have probably risen around twenty times from the 9.500-10.000 metric tonnes estimated by Godinho for the period around 1500. GODINHO, *Mito e Mercadoria...*, (1990), 325 c.f. CHAUNU's broader estimation of 10-20.000 tonnes p.a., *European Expansion in the Later Middle Ages*, Amsterdam: North Holland, (1979), 10; for today's statistics, see Table 1, 'World Production of Spices in Major Producing Countries', *Spices. Trends in World Markets, Commodity Bulletin Series*, F.A.O., Rome (1962). Antony WILD estimates the spice trade somewhat higher, at \$1.5 billion annually, or 350,000 tonnes, *The East India Company Book of Spices*, London: HarperCollins, (1995).

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⁵⁴ for a succinct and recent appraisal of these developments, see the chapter entitled 'Dyeing in Luca MOLA',

possible that went by the name of spices during the sixteenth century, an indication of their provenance and sixteenth century application. It cannot hope to be an exhaustive list, and there are doubts as to the precise nature of some of the entry terms and, on occasion, the use of the root term 'spice' from which the selection is made, but I hope the appendix nevertheless supplies an idea of the scope and range of products denoted.

2. THESIS INTRODUCTION.

This thesis grows out of the Portuguese intrusion on to the Eurasian spice trade at the very beginning of the sixteenth century with the inauguration of a dramatic oceanic route to the traditional areas of spice cultivation in the East, that is the Indian Malabar coast, Ceylon and the Moluccas in the Indonesian archipelago (*Insulindia*). If spices had never disappeared from European markets, it was the first direct and sustained commercial contact Europeans enjoyed with the Indian Ocean since the demise of the Red Sea fleets based at Myos-Hormos the Roman Emperor Augustus had used to exploit the luxury trades of the Indies from the latter half of the first century B.C. and that Pliny had once valued at 100 million sesterces a year; the few adventurous Venetian merchants that got so far during the *pax mongolica* of the fourteenth century brought back little in terms of marketable commodities but helped to keep alive the dim awareness of a bountiful land of milk and honey in the European collective memory.

The navigational discoveries of Dias and da Gama were subsequently followed up with great application by the Portuguese Crown, which appreciated its prospective role both for the material wealth an active role in the Euro-Asian spice trade would engender, as for the political and messianic role the Portuguese Kingdom, rebaptised Empire, would assume both within and without Christendom. The *plano das Indias* concocted by the Portuguese monarchy as it inched its ships around the African landmass concretised into the roots of Empire, an empire which, if diffuse, was basically an empire sustained by overseas commerce, providing 68% of Crown revenues in 1515, and in essence an empire of the East, in which oriental spices were the single most important source of revenue, more than all sources of Portuguese domestic revenue combined, and responsible for as much as 40% of total income accruing to the Crown.⁵⁶ Portuguese history is dominated by this orientation until the 1580s, when the next great cycle of Portuguese economic history begins with the gradual substitution of her imperilled eastern possessions for the relative proximity and security of her Brazilian territories. The *cycle des épices et de l'or* gives way to the *cycle du sucre*.⁵⁷

Historical studies of the Portuguese spice trade have been convincingly produced elsewhere, pre-eminently by the doyen of post-war Portuguese historical scholarship, Vitorino Magalhães Godinho, who has unearthed most existing documentation relating to the sixteenth

⁵⁶ complicated calculations summarised in Appendix 1.

⁵⁷ The terminology is that of Admiral Teixeira da MOTA; see for example, his contribution to the *Neuvième Colloque International d'Histoire Maritime*, Seville, 24-30 September 1967 and entitled 'Les routes portugaises de l'Atlantique' (1968).
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century empire to produce the fullest exposition of the networks and mechanisms of Portuguese trade. My own work draws on this tradition, but proposes to take a somewhat particular vantage point, that of the European re-export or redistributive trade of Portuguese spices. This will allow me to observe the course of the trade beyond the dynamics operative purely within the Portuguese imperial sphere, which have hitherto framed the tenor of research. Even Godinho's *magnum opus*, embracing as it does the world's four continents, terminates the imperial process in Lisbon, as if the commercial flows were hermetically sealed within the Portuguese Empire's political confines. Thus, in part, my work is an answer to Hermann Kellenbenz's call for more application to economic history at a trans-national level, his reminder that the flows of high value goods and capital over long distances are particularly unsuited to the straightjacket of national history.⁵⁸ But it is also a reminder that the historical process that we call the Discoveries (*os Descobrimentos*) carries through on to the European landmass with much the same counterbearing logic as Newton's second law of physics; for these new trade flows that entailed carrying goods half the way around the world provoked, by counter-reaction, the necessary creation of correspondingly new routes and commercial structures to reach the fresh consumers awaiting these same goods all over Europe. Lisbon is again the starting point of our investigation, only that we are travelling towards great central European markets such as Nuremberg and Vienna rather than the pepper gardens and trading emporias on the shores of the Indian Ocean.

I have chosen, then, to neglect the history of the Portuguese impact on Asia, what might most relevantly have concerned the relationship between the Portuguese and the indigenous commercial cultivation of spices in the three pre-eminent areas of Asia where production was concentrated. For it is a fact that the Portuguese were unable to exert any meaningful influence on the productive process as they were, say, for sugar, where the Crown was in a position to distribute favourable land to prospective producers and dictate ceiling quantities to be produced on mid-Atlantic islands such as Madeira, or in refining or manufacturing the goods concerned. At the most, the Portuguese managed to interfere with the cultivation of spices through violence, or the threat of violence, with the aim of ensuring some sort of monopoly; Orta related how on their arrival in Ceylon, the Portuguese 'took counsel to cut and sterilize many trees such as nutmegs, cloves and pepper'.⁵⁹ Only with the Dutch seizure of the spice islands, the re-distribution of land amongst Dutch ex-VOC servicemen and the creation of plantation economies on the back of imported slave labour -

⁵⁸ KELLENBENZ, *The Rise of the European Economy*, (1976), x.

the so-called *perkenier* system - did Europeans develop any real control over production and by extension, over the world market.⁶⁰

For the sixteenth century, by contrast, the Portuguese by and large merely traded what came on to the market, playing on the price differential between purchase and sales of oriental spices, providing carriage and hazarding such costs as this may have engendered, chiefly protection of carriage. Key to this exercise was re-export, which we can define as the exporting of previously imported goods without additional processing. If not so noticeable a trade issue in our age of multilateral international trading, re-export was nevertheless from the resurgence of European international trade in the twelfth century under a few actors like Venice and Genoa and even with the creation of sizeable domestic markets in the eighteenth century very much the norm, a highlight of economic policy and an issue of great political importance. No more than 10%, and perhaps as little as 1.5% of spices imported by the Portuguese would have been consumed domestically, and those that flowed on to central Europe more than doubled their Lisbon market value.⁶¹ As we shall demonstrate in section 7.4. by means of a price ladder plotted against a cost function, and which goes some way to confirm Hermann Kellenbenz's suspicions, the lion's share of profits were to be made on the European trading circuit.⁶²

A critique has nevertheless been mounted by a number of historians who have advised us not to allow 'the glitter and glamour of trade in luxuries.. to overshadow the heavy trade

⁶⁰ the *perkenier* system is described by George MASSELMAN, 'Dutch Colonial Policy in the Seventeenth Century', *Journal of Economic History*, vol. XXI (1961) and Willard A. HANNA, *Indonesian Banda: Colonialism and its Aftermath in the Nutmeg Islands*, Philadelphia (1978). It was accompanied by the destruction of three quarters of all nutmeg trees in unwanted areas by 1681, draconian measures such as the death penalty on anyone caught growing, stealing or possessing clove or nutmeg plants without authorisation and a lime drenching of the spice before export to ensure that not one seed was left fertile. A system of regular and rigorous police control (*Opziener*) was instituted by the V.O. Company from 1681. This degree of control over production of Asian spices might be considered more seriously when addressing the historical consensus that Europeans had little impact on the Indian Ocean area until the eighteenth century, S. ARATSARATNAM, *Maritime India in the Seventeenth Century*, (Delhi, 1994); H. FURBER, *Rival Empires of Trade in the Orient, 1600-1800* (Minneapolis, 1976).

⁶¹ the re-export contract of 1 January 1512 obliged Encuria and Chamorro, agents of the Fugger, to sell 'até 300 quintais de pimenta pelo miudo pera dispesa do reyno', i.e. on the national market. This amounts to 1.5% of the total volume for which the contract was made. *Cartas Missivas*, A.N.T.T., m. 2, no. 73. Elsewhere, Braudel made the estimation that 10% of volumes imported remained in Portugal, in *Civilisation and Capitalism 15th-18th century*, vol. III, 143. As a source of comparison, one could perhaps recur to the well-known sugar ordinance of 1498 by which the market for Madeiran sugar was divided up; 7000 arrobas out of a total export of 120.000 were earmarked for the domestic Portuguese market, that is about 5.83%. An aggregate calculation for the sugar trade is otherwise complicated by additional sources of supply; the Azores, for example, paid an annual tribute of 15.000 arrobas. The 1498 decree is published in SILVA MARQUES, *D.P.*, vol. III, no. 423, 488 ff.

⁶² H. KELLENBENZ, 'Autour de 1600: le commerce du poivre des Fugger et le marché internationale du poivre', *Annales E.S.C.* no. 1, Paris (1956), 20.
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in cheap bulky goods'.⁶³ Chaunu has tried to expose the fallacy of such a position; he has estimated that if in the sixteenth century corn traded across the Mediterranean amounted to a total of 9000 tons of silver, then the sales value of Portugal's Asian commodities amounted to between 7000-7500 tons.⁶⁴ There was little in it, then. But others, working in the tradition of the *Annales* school, have gone even further by suggesting that even the Baltic grain trade departs from the ground rules of *dever e haver*, that it was 'infinitesimally small.. in relation to the number of mouths they were to feed' and was thus peripheral to the quantitative workings of the dominant subsistence economy.⁶⁵

My sympathies are more clearly with the branch of inquiry that searches for the seeds of change, the dynamic within the early modern European economy, than what is descriptively representative of that economy. And the dynamic of that period was undoubtedly trade, one that encompassed both the glamour of world trade, enough for Immanuel Wallerstein to situate the beginnings of his 'world system' in this century, as much as it encompassed the quantitatively marginal but ever more significant displacement of heavy bulk goods of mass consumption such as salt and grain. Here spices had always been amongst the pioneers of long-distance travel, they had shown the way to breaking up the autarkic and natural medieval economy whose characteristics were regional disintegration and a low utilisation of transportation, they were a liberating force.⁶⁶ But there is equally a case, and behind it a long tradition, that considers the extended superprofits of the spice trade, which placed it at the forefront of capital accumulation. As the Venetian chronicle Priuli reminds us: 'from one ducat they can make more than one hundred'.⁶⁷ This ready capital accumulation, a demonstrable historical reality and prime target of popular hostility in the social unease that preceded the German Reformation, was consequently employed in the productive and technological sectors, chiefly central European metal mining, one of the classic areas of proto-

⁶³ Robert LOPEZ, *Medieval Trade in the Mediterranean World*, 116; also Jacques HEERS, 'L'occident aux XIV^{ème} et XV^{ème} siècles: aspects économiques et sociaux', *Revue du Nord*, (1964), t. XLVI, 106-7. These comments take their place in a long tradition, such as we find in Edward GIBBON, who dismissed the 'objects of orient traffic' as 'splendid but trifling', *The History of the Decline and Fall of the Roman Empire*, London (1909), vol. I, 62.

⁶⁴ quoted in Niels STEENSGAARD, 'Asian trade and world market: orders of magnitude in 'the long seventeenth century'', in *L'Histoire à Nice, Actes du Colloque International*, 1980, vol. III, Nice (1981), 130.

⁶⁵ Kristof GLAMANN, 'European Trade, 1500-1750', in CIPOLLA ed., 466; Bartolomé BENASSAR, 'A função do comércio e a teoria dos círculos de comunicação', vol. I, t. II of Pierre LÉON ed. *História Económica e Social do Mundo*, ed. Sá da Costa, Lisbon (1984).

⁶⁶ James E. VANCE Jr., 'Transportation and the Geographical Expression of Capitalism', in E.D. GENOVESE & L. HOCHBERG, *Geographical Perspectives in History*, Oxford: Blackwell (1989), 122.

industrialisation, and conventionally understood as amongst the harbingers of economic progress.⁶⁸

The economic significance of the trading link between Portuguese Empire and Europe, then, is clear, if noticeably absent from existing work on trade flows and commercial management in the Portuguese Empire. This has to be understood in part as a product of recent Portuguese political history over the last hundred years, particularly the experience under the Estado Novo (1933-74), whose nationalist orientation was keen instead to assert its fraternity in spirit with its subject peoples overseas in order to preserve its unity at a time when decolonisation was generally pulling western empires apart. By the same token, Europe was regarded with ambivalence, as a harbinger of undesired progress and a reminder of Portuguese backwardness. Portuguese historiography, echoing this political position, has until recently remained deeply suspicious of the idea that European linkages served as a determinant in the process of imperial expansion, construing for itself the self-congratulatory myth of *pioneirismo*, that from the precocious beginnings of nationhood Portugal was *a primeira nação organizada* and that consequently, she was able to forge as magnanimous an enterprise as the Discoveries while the rest of Europe was busy searching for a collective identity.⁶⁹ Foreigners, if they played a role, served merely to relay Portuguese achievements: to quote Sousa Viterbo, 'to divulge the achievements of our maritime discoveries' (*para divulgar os progressos dos nossos descobrimentos marítimos*).⁷⁰ The process of imperial expansion, consequently, gets described essentially in terms of Portugal's historical trajectory from *espaço peninsular* to *espaço mundial*.⁷¹

The situation today is in many ways antithetical. Having discarded the idea of empire as a product of nationalist will, historiography has gone over to appreciating the perspective of the 'other side' with the claim that they too were involved in the process of expansion, that the imperial dynamic wasn't something singularly imposed over the native societies but was in large part a function of their own history. Talk of the Portuguese 'discoveries' has been tactfully left aside; more heated criticism is vented with less complications against

⁶⁸ see Clemens BAUER, *Unternehmung und Unternehmungsformen in Spätmittelalter und der beginnenden Neuzeit*, Jena (1936).

⁶⁹ Tito Lívio FERREIRA, 'O outono da Idade Média e a Primavera de Portugal', Actas do Congresso Histórico de Portugal Medieval, t. II, in *Bracara Augusta*, nos. 39-40, vol. XVI-XVII, (Jan-Dez. 1964). Repeated by the Portuguese Culture Minister Manuel MARIA CARRILHO, *The European Magazine*, 10-16 October, 1996, 2.

⁷⁰ Francisco M. SOUSA VITERBO, *O monopólio da cortiça no século XV*, Lisboa: Off. typ. (1904), 9.

⁷¹ see, for example, Alfredo Pinheiro MARQUES, *Guia de História dos Descobrimientos e Expansão Portuguesa*, (1986) and John H. Coatsworth and Stefan Smith, (2001), *Portugal and the European spice trade, 1480-1580*
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'eurocentric interpretations' (*leituras europocêntricas*).⁷²

Nevertheless, since the loss of Empire and inspired to join the democratic community, the country has re-kindled its links with and built up its European dimension, culminating in Portugal's formal accession to the European Community in 1986. Europe has been recently described by the President as 'Portugal's most demanding challenge'. It seems to be a case of political priorities slowly coming to terms with economic realities, for trade with Europe overtook that with the rest of the Portuguese speaking world from the second half of the nineteenth century. It seems, then, an ideal time to take a look at the dynamic by which Portugal divorced itself from European trade at the beginning of its imperial construction.

I have divided the structure of this thesis into four parts. I shall begin with two lengthy descriptive sections, the first of which shall address specifically the various projects of the Portuguese Crown intended for the European re-distribution and sales of these commodities. This encompasses the departure from a *laissez-faire* policy of free trade upon payment of duties towards an inconclusive dilemma between passively sub-contracting the rights for such a trade from Lisbon to private parties and the creation of an exclusive Crown instrument for the formal supervision of such a trade attached to the long-standing body of Portuguese merchants in Antwerp, the Feitoria de Flandres. Both of these ideas were premised upon the Crown's assumption of exclusive monopoly rights over trade, which, if relatively easy to impose *ex novo* over the territories of Portugal's nascent overseas empire, and readily backed up by force of arms, could not be so easily tailored to European trading routes with their slowly woven webs of established practice, products of delicate historical compromise. One of the tasks of this thesis, then, is to see what was made of these pretensions to monopoly and whether they served their purpose, stabilising and controlling trade flows at the same time as maximising profits for their holders. Monopoly rights provided the foundation of one of the unique developments of this period by which the Portuguese Crown traded on its own account, a system baptised by the Brazilian historian Manuel Nunes Dias in 1962 as monarchical capitalism (*capitalismo monárquico português*). This evolved over the course of the period under investigation from the impetus of the vigorous state directed policy of discoveries, displacing notions of a free and open trade, and was masterminded by the Casa

⁷² Denunciations to be found in Armando CASTRO, (1985), vol. III, cap. IX, sec. 1.II.a 'Eliminação das leituras europocêntricas' and reiterated by A.J.R. RUSSELL-WOOD, 'Novos caminhos no estudo da expansão portuguesa', *Oceanos*, (November 1990). A similar malaise has affected writing on the British Empire, if not to the same degree - nobody has suggested that the British suffered collective amnesia following the break-up of empire. For the debate between eurocentric as oppose to 'ex-centric' positions, see C.A. BAYLY, *Imperial Meridian. The British empire and the world, 1780-1830*, London (Longman: 1989).
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da India, the official government overseas trading agency. But as we shall see, no one policy prevailed and all were variously applied over the course of the sixteenth century for different reasons and with differing implications for Portugal, be it her commercial success, the role of foreign participation within the Portuguese imperial enterprise or indeed the nature of the country's position within Europe.

The second part of the thesis proceeds to the sales mechanisms themselves, which I have typologised in Braudellian fashion, that is hierarchically, as contract trade, sales at public fairs and permanent trade. I investigate the merchants with whom the Portuguese traded, their relationship with the Portuguese Crown and their business strategies. I proceed to look at the geographical diffusion of the trade in Portuguese spices, with particular attention to the central European market which had long eaten up the lion's share of 'choleric' spices, those which burned the mouth, and the steady percolation, through retail, down to the consumer at the furthest ends of Europe.

The third part of the thesis might at first glance appear somewhat incongruous, a sharp break in the history of the trade. It deals with the culture of consumption in Europe with an eye to transcending issues of supply for those of demand, which are nonetheless, as any economist would point out, in strict symbiosis. On the basis of what models of taste and cultural practices were these commodities desired? To what extent did fashion dictate market developments? Is there something in demand that can help us understand spices' remarkable commercially motivating power? Such questions, it is hoped, will endow a new perspective on what would otherwise be the somewhat staid vision of a conventional trading history.

The fourth and concluding part is distinct from the descriptive body of the thesis in that it selects a benchmark event from which to summon explanations that serve to converge all the themes most pertinent to the Portuguese administration of the spice trade during the first half of the sixteenth century. It isolates the most active product of Portuguese redistributive thinking, one of the more complex and poorly understood constructions of the Portuguese Crown, the adjunct to the Feitoria de Flandres, which as an institution was endowed with no explicit name but embodied in the charges of the royal feitor. I shall refer to it henceforth as the Crown Feitoria. The Crown Feitoria took its cue from the Casa da Índia and ultimately the King, and is thus distinct from the Feitoria *tout court*, which was an elected self-governing body representing purely Portuguese merchant interests in the port of Antwerp. In the first part of the thesis, dealing with Crown trading policy, I will already have synthesised the tasks of this Crown Feitoria with the institutional apparatus of the Portuguese empire and, alongside that, its conjuncture with the dynamics of the great commercial metropolis of the period, Antwerp, where oriental goods were brought for European sale from

the 1440s until at least the 1580s, when re-exports from Portugal started to splinter off into a number of European ports of entry, but pre-eminently Hamburg and Amsterdam. I shall not take my thesis much beyond this date; oriental spices were being substituted for Brazilian sugar as the staple of Portuguese economic fortunes by this time, and even at the level of European trade other product sectors were showing themselves off as more propitious, more lucrative investments.

Having clarified its context, the fourth part of the thesis intends to investigate the causes and significance of the apparent closure of this Crown Feitoria in 1549, a much vaunted if shaky landmark traditionally employed in recounting the history of Portuguese imperial fortunes. S.T. Bindoff, for example, echoing Portuguese historiography, has asked ‘Whatever the reasons for this step, or its immediate consequences, it symbolised the passing of an age’.⁷³ The implications of institutional collapse, as a consequence, will be considered critically, understood in the main to have conspired to bring down with it a whole set of commercial ideas on which the Portuguese Empire was founded; if not the principle of monopoly, then at least the active, indeed pre-eminent role of the Crown in the imperial economy. The idea of staple sales, similarly, already redundant in other more progressive European economies, disappeared. It remains to be elucidated whether the collapse of the Feitoria signified the end to an active redistributive policy for spices conducted by Portuguese merchants generally, and not just the Crown, and thus forewrote wider historical developments such as the end to the formative presence of Portuguese commerce on the north European scene and the takeover of the European redistributive trade of high value goods by the Dutch, and by extension, the first plank in their rise to imperial greatness of a kind that eclipsed the Portuguese Estado da Índia itself.

It is precisely in the formulation of such hypotheses that we must be cautious in not jumping to the understanding that the ‘collapse’ of 1549 marked a defeat of Portuguese national interests. Indeed, it is highly ambiguous whether the collapse of the Crown Feitoria trading arrangement was really a bad thing, particularly in the light of the congratulatory letters sent to Dom João III by his ambassador Tavora and the chronicler Sousa’s impression that ‘it was something that was well received generally’ (*era cousa bem recebida geralmente*).⁷⁴ But if we are to grant the general sigh of relief we understand greeted the decision to close the Crown’s feitoria in Antwerp, how are we then to reconcile

⁷³ S.T. BINDOFF in *New Cambridge Modern History*, Cambridge: Cambridge U.P., (1969), II, 68.

⁷⁴ *Annaes d’el rey Dom João III*, vol. II, 279 with respect to a letter consulted that was written by the King
 15 February 1549
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historiography's legacy of otherwise glowing reports of the Feitoria's place in the scheme of Portuguese, and beyond that, European trade generally?⁷⁵ There are added complications in trying to establish whether closure was a good or a bad thing; it is really not clear that the regimes which followed were any better; subsequent sub-contracting, for all Lach's sanguine announcement of a 'new' era of contract trade between 1570-98, was racked by reneged agreements and contracts that fell through, state bankruptcies and goods' seizures. How then do we explain that the Portuguese re-export leg proved such a repeated disappointment in the light of its demonstrable commercial potential?

This is a question which transcends the institutional collapse of the Crown Feitoria, and even the notion of a culture of imperial decadence from the mid-sixteenth century which might be associated with it. To be sure, we can point out the features of Portuguese mismanagement, but the evident Portuguese failure to institute a sustainable remunerative re-export leg needs to be set against the equally evident commercial success of a number of international trading houses that were sub-contracting within the Portuguese regime. What can we conclude from this? Merely a case of 'private lucre, public loss'? Or, should it provoke us to consider the wider conclusions drawn by the so-called dependence school pertaining to the systematic exploitation of economies peripheral to the 'world system' at the hands of unfavourable terms of trade and productive differentiation dictated by an economic core area? Much has been made of this in explaining Portugal's long-term 'backwardness' and passivity in the face of economic challenges to the national interest. Perhaps, most pertinently to this thesis, it could be shown how the Portuguese King's financial incapability of alone financing the construction of Empire drove it into the hands of High German precious metal suppliers who, in return for their loans, demanded ever-greater rights and privileges to the spice trade, giving rise to a situation where High Germans found themselves at the logical beginning of the entire trade cycle - producing the goods the Portuguese needed to trade to finance their expansion - but also at the end of this famous trade cycle, directing the most lucrative of trade openings, the re-export trade, to those same German markets which the Portuguese depended upon for sales of these same spices. From which derives Antonio Sergio's famous indictment

⁷⁵ To Norbert PALY the Feitoria was 'une organisation modèle', 'La Casa de Portugal d'Anvers' in *Boletim da Sociedade de Geografia de Lisboa*, nos. 9 & 10, 411ff. (1945), 424; to RAU 'uma esquema completa com elementos indispensáveis para dar base e segurança ao comércio, estabilidade aos direitos reais, apoio ao tráfego marítimo', *Feitores e Feitorias. "Instrumentos" do Comércio Internacional Português no Século XVI*, Lisbon (1966), 17; to NUNES DIAS the 'principal sucursal do capitalismo português', 'Os metais alemães', in *Actas do Congresso Internacional 'Bartolomeu Dias e a sua época'*, vol III, Porto, (1989), vol. III, 568; to W.A. ENGELBRECHT, 'melhor organizada e regulamentada do que as 'nacoes' dos outros negociantes estrangeiros da cidade', in 'Esboço das relações históricas entre Portugal e a Holanda', *Congresso do Mundo Português*, vol. VI, 401-35. Lisbon (1949), 423.

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that the Portuguese amounted to little more than baggage-handlers on the commercial networks of their own empire.

But by undertaking an economic history of the spice trade, perhaps we are simply missing the point. By explaining and assessing trade policy as a product of economic rationale, that is with the goal of accumulating profit, it could be that we are simply not engaging with the wider *raison d'être* of Portuguese empire construction, that of an essentially political project aiming at the acquisition of dominions, whether at the level of *raison d'état*, the dynastic and personal aggrandisement of the monarchy, or a restive nobility. It might be opportune to remind oneself of the dangers of presentism, of which economic history, a brainchild of the nineteenth if not twentieth century, is especially prone: designating and investigating a certain sector of human activity in the past with tools and concepts that we have only recently come into possession of and which consequently fail to take into account the scope of action, and in this case the motivations available to actors at the time.⁷⁶ So that it is worth casting a glimpse back from our own times where a government's political success is more than ever before restive upon economic performance, measured as growth and its corollaries, inflation and unemployment, to pre-modern Europe, where the great deeds (*grandes feitos*) of a king's reign seem not to have measured in economic phenomena of any kind, but by the number of battles won and by the amount of territory acquired.

I think it is nonetheless valid to ask to what extent the spice trade was merely the means for the fulfilment of chosen political ends, a tool that in whoever's hands - even High German subcontractors - served to finance the construction of a fleet of warships and an overseas political administration to enact the King's word and see to its enforcement; and how much commercial policy was an end in itself, a position subdued beneath the rhetoric of nobler causes but amounting to the fact that empire was little more than an exercise in the amassing of wealth (*amontoar riquezas*) and in the light of which, in Steensgaard's terminology, the institutional machinery that sprang up around the Carreira da India was little more than a protection cost. Or, in the same vein, whether the creation of a Crown monopoly in the trade of certain spices aimed more at the physical control of the seas than an opportunity for the Crown to ensure inflated prices of sale.

The balance sheet would lean towards the former instance. A look at of those accolades of sixteenth century political life, namely *fama*, *honra*, *grandeza* and *gloria*,

⁷⁶ see, for example, G.W. STOCKING, 'On the limits of presentism and historicism..', *Journal of Hist.* Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580 *Behavioural Science*, 1, 211 (1985).
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scattered everywhere across the official literature of the time, would suggest that conquest was the principal criterion for their assignation.⁷⁷ The contemporary debate on *decadência* took its cue more from the size of the Estado da Índia, from the number of territories it comprised, than from its physical wealth, and situated decadence in the tendency ‘more to conserve things than to go and conquer’ (*mais a se conservar que a conquistar*).⁷⁸ A glance at the order of things in the King’s official title *Dominus Guinae et conquestae, navigationes as commercii Etiopae, Arabiae, Persiae astque Indiae* suggests equally that conquests came before commerce.⁷⁹ Frederic Lane has pointed out that it is not always possible to clearly delineate between two discrete types of organisation as ‘government’ and ‘business’, and indeed the standard A-level essay seeking to weigh up the economic costs as as oppose to benefits of the British Empire always runs into incalculability. Thus, the spice monopoly cannot be considered uniquely as a profit-making exercise, but must be approached as ‘part and parcel of the same [governmental] enterprise that waged war to build an empire’.⁸⁰

In short, this thesis shall make two holistic approaches to the spice trade: the first will assess it structurally from the perspective of the Portuguese empire-building process in the light of the bitter subsequent debate regarding the roots of *decadência*; the second, will investigate the spice trade’s remunerability as the object of competition between the Crown and outside commercial interests in a nascent world economy.

Unfortunately, there are serious shortcomings with the statistical evidence (what Godinho referred to respectfully as *a base morfológica* of his research) relating to the circulation of ships, goods and capital on the Lisbon to Antwerp commercial circuit. The real essence of commerce: prices of purchase and sale, costs, duty payments, labour costs, turnover, rates of profit, cannot be fully elucidated, and almost never in continuous series. The

⁷⁷ see for example, De como El Rey determinou de passar em Africa, cap. XLVII of GOÍS, *Cronica de D. Manuel*: ‘.. mas tudo isto aproveitava pouco pera El Rey deixar de poer em obra a vontade que tinha de imitar os Reis seus antecessores e ser-lhes companheiro na gloria que alcançaram nas conquistas das cidades, vilas, castelos..’

⁷⁸ Padre Manuel GODINHO, ‘Viagem da Índia por terra para Portugal no anno de 1663’, in Manuel Bernardes BRANCO, *El-Rei D. Manuel*, Lisboa (1888), 85.

⁷⁹ Dom Manuel employs this title in his letter to Dom Jorge da Costa, the Portuguese Cardinal-Protector at Rome, 28 August 1499, see A.N.T.T. Collecção de São Vicente, vol. XIV, fl. 1, or later in his letter of February 1501 to the Doge of Venice, see *Epistola de El-Rei D. Manoel ao Doge de Veneza, Agostinho Barbadoico, 22 de Fevereiro de 1501*, trad. from Latin by José Pedro da Costa, repr. Coimbra: Impr. da Universidade. (1907).

⁸⁰ F. LANE, ‘Force and enterprise in the creation of oceanic commerce’, chap. 24 of *Venice and History*, Baltimore (1969).
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evidence is both too dispersed and lacking. The earthquake of 1755 and the consequent fire destroyed the buildings housing much of the state archival collection. Very little has been recovered of the records of the Casa da Índia, in the tearful words of the historian perhaps best qualified to have set eyes on them, 'a tragedy whose implications can never be exaggerated' (*une tragedie dont on n'exagera jamais la portée*).⁸¹ Prior to the second half of the sixteenth century we are forced to make do without quantitative sources: Rau reported that she knew 'nothing - or so little that it amounts to nothing - in the principal Portuguese archives that could contribute significantly to a precise, continuous and quantitative estimation of this traffic'.⁸² This is what evidently dissuaded António Marques de Almeida from pursuing his *aproximação* entitled 'Capitais e Capitalistas no Comércio da Especiaria. O Eixo Lisboa - Antúerpia (1500-1549)' into a Ph.D. thesis.⁸³

Granted this shortcoming, I originally wanted to approach the spice trade through the four categories of source material readily marshalled from Portuguese archives: price data, privileges, contracts and freight. But ultimately such source materials were either seriously incomplete (such as was the case with freight), or didn't bring me close enough to the real questions that needed to be asked about the trade. Price material was particularly disappointing beyond its utility in deconstructing the apportioning of profits, as also were privileges, which did not as I originally believed serve to construct the framework in which foreign contractors in the trade participated. Contractors, rather, were handpicked individually by the King and it was the court circles that saw the politicking for short-term contracts and other trading arrangements. Another disappointment were the holdings of the Casa da Feitoria Portuguesa de Antuérpia (C.F.P.A.), particularly once the duality of operations between the Feitoria and the Crown Feitoria became clear to me: for the most part they deal with trivial matters concerning the upkeep of the organisation serving Portuguese merchants' collective interests in Flanders, and very little to do with the mechanics of the spice trade.

I have ended up with a very open approach that can often do little more than frame a variety of timed questions, many of which cannot be adequately answered. I have supplemented the meagre statistical evidence which has availed itself with a fair amount of speculation on the forms of trade adopted by respective actors within the commercial scheme

⁸¹ GODINHO, *L'économie de l'Empire Portugais aux XVIe et XVIIe Siècles*, (1969), 50.

⁸² "rien - ou si peu que rien - dans les principales archives du Portugal qui puisse valablement contribuer à une estimation précise, continue et quantitative de ce trafic"; Virgínia RAU, 'Sources pour l'Étude de l'Économie Maritime Portugaise', in Michel MOLLAT ed. *Actes du IVe Colloque d'Histoire Maritime*, 255.

⁸³ a plan de recherches for doctoral work that was never developed, but that was nonetheless published in Halikowski Smith, Stefan (2001). Portugal and the European spice trade, 1480-1580
1993. Lisbon, Edições Cosmos.
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of spices. If, for example, we can understand the Portuguese Crown trade system in terms of precedent, theoretically the idea of a staple is problematic once chinks in the Portuguese trading monopoly appear and alternative sources of European market supply assert themselves.

But where I have encountered good sources, I try to let them speak for themselves. Based in Italy, I have tried as much as possible to harness Italian diplomatic reports, informed comment and botanical research as set down in the rich resources of printed media, particularly from Venetian quarters, that party next to the Portuguese most interested in the circumstances of the European spice trade. This has not been a default option - there are huge amounts of material here and, as my colleague Francesc Relaño has maintained with respect to cartographic developments, the Portuguese discoveries were often better recorded outside Portugal than from inside.⁸⁴

But there is much dissatisfaction too with the approach adopted. I did not have the time or resources to comb the Stadsarchief in Antwerp more thoroughly, and made little headway deciphering the High German scribe's Gothic hand. Too many times we are unable to single out what was the historical case for the spice trade; we are left at wider and imprecise generalities. The spice trade was not singular and self-bounding beyond the State's level of competence, for until the nineteenth century independent merchants at the upper level of commerce rarely made a trading specialisation, or when they did, they were careful to retain other branches of the firm operative in different product or geographical spheres.⁸⁵ This was a clear-cut means of spreading risk at a time when the spice trade, like many others, was dogged by what Peter Musgrave has called the 'economics of uncertainty': high risk, unsatisfactory information, jeopardised property rights.⁸⁶ Thus we are committed to infer from parallel trades, sugar particularly, and accept that decisions regarding cargoes, purchasing prices, strategy as a whole have a wide array of conditioning factors, many beyond our grasp.

There were considerable practical problems in the researching of Part III, which required an entirely independent bibliography to the parts of the thesis on trade. The sources

⁸⁴ see, for example, Julieta Teixeira MARQUES DE OLIVEIRA, *Fontes Documentais de Veneza referentes a Portugal (1566-1600)*, 2 v., Lisbon (1997), which as Joaquim Veríssimo Serrão points out in his Foreword, have yielded political comment on the international situation of a kind unyielded by Portuguese sources.

⁸⁵ E. KOEHLER, *Der Einzelhandel im Mittelalter*, Stuttgart/Berlin (1938), 55-60.

⁸⁶ Peter MUSGRAVE, 'The economics of uncertainty: the structural revolution in the spice trade, 1480-1640', in P.L. COTTRELL and D.H. ALDCROFTS eds., *Shipping, Trade and Commerce: Essays in Memory of Ralph Davis*, Halikowski-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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for a study on demand are greatly complicated by the fact that spices were always a nebulous grouping, covering such a wide area of application that recorded comment was diffused over a number of different genres of literature. I have consequently had to look in herbals, encyclopedias, lexica, travel reports, personal diaries, Books of Marvels, recipe books, Books of Manners, Books of Secrets, Books of Husbandry, practical medical handbooks or leechbooks, pharmacopeia, pharmacists' handbooks, theological treatises and the *belles lettres*.

I had originally considered that the end result, this thesis, was composed rather of plenty of semi-independent nuclei through which fine threads lead in many different directions, than one overarching statement. It is a thesis really no more and no less about the world of spices in a given period, and I was to submit it with the conviction that knowledge needs encompass horizontal space, extension across surfaces, as much as it needs conventionally tunnel vertically and in a unilinear argumentative manner into the depths. But today, as I look at it, if still large and unruly, a sustaining contention does emerge: namely the the spice trade was sustained through the mystification of the commodities and their qualities in the eyes of European consumers. That the Portuguese Crown was unable to work out a stable and profitable framework for its administration, or that the Feitoria de Flandres collapsed in 1549 is really of lesser importance. In the last instance, the spice trade tottered when people at home started to desire other commodities more than the traditional spices, and indeed the Portuguese by establishing their true provenance only assisted in the description, illustration and examination, later classification, that effectively demystified spices in the European mind.

Part I. THE PORTUGUESE TRADE OF SPICES.

3. THE EVOLUTION OF A DIRECTING POLICY OVER THE SPICE TRADE.

3.1. The European spice trade before the Portuguese: primarily a Venetian system.

The Portuguese emerged on to a European market dominated by Venetian supply. The Venetians had regularly sent fleets of merchant galleys in state sponsored *muda* across the Mediterranean from the mid- fourteenth century to acquire spices at the ports of the Levant, from Alexandria at the delta of the Nile, Beirut and Acre, to Laiazzo in Little Armenia, at least during its brief heyday, and where the spices were disgorged after lengthy caravan treks from further East across the Fertile Crescent. The Venetian galleys went equally to Trebizond, on the southern shores of the Black Sea, and to Tana, across the water, particularly in the period when papal sanctions against trade with the Saracens were most stringently upheld. It was only from the second quarter of the fifteenth century, however, that Venice really asserted primacy over the trade, browbeating her competitors from Genoa, Florence, Catalonia, Provence and Sicily through a combination of commercial application and geographic advantage buttressed by protective measures that in Rothermund's opinion would qualify the system as 'guarded trade'. Verlinden has calculated that Venice consequently assumed approximately 5/7 of European trade with the Levant, though not enough to speak of outright monopoly.¹

The Venetian success in her oriental trade rapidly came to feature as the cornerstone of the republic's economy, more than had ever been the case with its rivals such as Florence and Genoa, much as spices later were to figure as the pre-eminent sector of the Portuguese imperial economy. Historians have made much of the myth constructed around the city's

¹ Dietmar ROTHERMUND, *Emporia Commodities and Entrepreneurs in Asian maritime trade, c. 1400-1750*, Stuttgart (1991), Chapter 3, 'The Venetian Weir-Basket: A Model of Guarded Trade'; Charles VERLINDEN, 'Le temps de la Méditerranée: le moyen âge', in *C.G.E.R.*, (1992), 147. WAKE is less convinced of Venetian supremacy. He puts the Venetian share in the total spice trade (including sugar) at 45% about 1400 and over 60% a hundred years later, *The Changing Pattern...*, 392. Alfred DOREN prefers to postpone Venetian supremacy to the beginning of the 1460s, when Genoa fell to Milanese control and lost her Aegean territories and Florence's position as Italy's leading industrial city declined, *Storia economica dell' Italia nel medioevo*, Padua (1936), 306. In any case, sporadic evidence of Genoese, Florentine and French spice purchases in Egypt and cotton, ginger and silk in Syria continues to avail itself right up until the end of the Mamluke period: G. MUSSO, *Nuovi documenti*, pp. 461, 490 ff.; SANUTO, *Diarii...* X, col. 95; F. LUCCHETTA, 'L'affare Zen in Levante nel primo Cinquecento', *Studi Veneziani*, X, (1968), 189; M.E. MALLETT, *The Florentine galleys in the fifteenth century*, Oxford (1967). In some cases, commercial treaties were even signed between Venetian competitors and the sultans of Cairo, J. WANSBROUGH, *Venice and Florence in the Mamluk commercial privileges*, SOAS 28 (1965), 483 ff. Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580

political stability; but they have not always referred it back to the wealth that enabled it, primarily the proceeds of her luxury trade with the East (*omnes de partibus ultramarinis divitias*).² As the Quinque Savii alla Mercanzia were keen to remind the city elders: ‘The principal fundament underneath this our city has always been trade’.³ The following description of Venice, as made by the great Catalan traveller of the fifteenth century, is standard formula in foreigners’ eyes: ‘The city’s wealth is extraordinary. The citizens bring thither the products of the Levant in as great a profusion and abundance as they do those from the West, so that the whole world seems to be in their possession’.⁴

The greatness of Venice, proceeding from her commercial standing, was the source of envy of every European ruler and a popular myth appreciated across the breadth of Europe. So that when Portuguese King Manuel I was searching for an analogy with which to describe the commercial importance of Calicut in a letter to Queen Isabella of Castile, he was almost obliged to liken it to Venice itself.⁵ European powers such as Portugal were constantly reminded of the substantive aspects of Venetian economic supremacy, such as its leadership in the formulation of currency units as a byword for exchangeability. From 1457, for example, the Portuguese economy, grounded as it was upon African gold, was aligned with the Venetian ducat following the decision to mint the cruzado at an identical weight and metallic content or purity.⁶

Now, there is every indication that the Portuguese King sought to apply the fame of Venice, not simply as a yardstick by which to measure the greatness of the trading world of

² see for example, D.S. CHAMBERS, *The Imperial Age of Venice, 1380-1580*, London (1970).

³ ‘El principal fundamento de questa città nostra e stato di continuo la mercantia’, Archivio di Stato di Venezia, Capitolare Nr. II, fol. 12b. Martino da Canale (c.1267-75) had noted almost two hundred years previously that ‘merchandise passes through this city as water flows through fountains’, cited in D.S. CHAMBERS, *The Imperial Age of Venice*. ., 9.

⁴ Pero TAFUR, trans. and ed. by Malcolm Letts as *Pero Tafur: travels and adventures, 1435-1439*, London (1926), chap. XX, 163 ff.

⁵ *Copia de uma carta de el-Rei de Portugal enviada ao Rei de Castella acerca da viagem e sucesso da India*, published in Prospero PERAGALLO, 13. This was a common analogy. Burgos was described in the *Crónica Incompleta de los Reyes Católicos, segun un manuscrito anonimo de la epoca* as ‘de tantos mercadores poblada que a Venecia y a todas las ciudades del mundo’, ed. Julio Pujol y Alonso, Madrid: Tip. de Archivos (1934). 21. As late as 1522, the City of Augsburg’s report to the Diet of the Imperial Council singled out Venice as the prime example of a city whose wealth and international prominence derived directly from her trading activities, cited by L. JARDINE, *Worldly Goods. A New History of the Renaissance*, London: Macmillan, (1996), London (1996), 344.

⁶ F. MATEU Y LLOPIS, ‘El ducado, unidad monetaria internacional oro durante el siglo XV, y su aparacion en la peninsula Iberica’, *Anuario del Cuerpo Facultativo de Archiveros, Bibliothecarios y Arqueologicos*, II, (1934), 134. A. C. TEIXEIRA de ARAGÃO, *Descrição geral e historica das moedas.. de Portugal*, I, Lisbon (1874), 230. Frankowski-Smith, Stefan (2004), Portugal and the European spice trade, 1480-1500 (Edinburgh: University Institute)

Asia that his fleets had unveiled to Europeans, but, amidst the bombastic atmosphere at his own court, the achievements of his own kingdom and his personal reign. To seize the spice trade was perhaps the clearest indication that Portugal could muster that, if she had at one time been reliant on Venetian shipments for the supply of these goods, now she had outdone La Serenissima. Manuel is said to have addressed da Gama and his men on ‘those oriental riches so celebrated by the ancient writers, a part of which have made through commerce such great powers as Venice’ (*aquelas orientais riquezas tão celebradas dos antigos escritores, parte das quais por comércio têm feito tamanhas potências, como são Veneza..*).⁷

If, then, the element of rivalry in the relations between Venice and Portugal is to be a clear theme running through this thesis (see sections 4.4. and 12.51), a match to which the Venetians proved happy to rise, often in scheming complicity with the Mamelukes, and was sustained as a commercial contest between the Levantine and Atlantic systems of trade throughout the ‘long’ sixteenth century with no clear conclusion until the Dutch and English resolved the issue at the beginning of the seventeenth century, I also wish to demonstrate in what follows the shaping influence of Venetian precedent on the history of Portugal’s management of the spice trade and the commercial and institutional forms it adopted, particularly as regards its own redistributive network. The obvious point to begin at is a description of the Venetian trading system itself.

The Venetian redistribution of oriental products was conducted according to two successfully complementary regimes, at least since the collapse of the Champagne fairs, which had seen a unitary policy sponsoring free re-export and encouraged with duty exemptions and open to all parties, Venetian and non-Venetian alike.⁸ Following the inauguration of the ocean-going Iberian *périple*, which had been pioneered by the Genoese in the 1270s, the direct route to north European markets was open to Venetian convoys, though even if the first set sail in 1318, they were only instituted on a regular basis from 1374.

The fine spices of India, drugs and aromatics from the Indonesian archipelago, ginger from Arabia, all these were conveyed in large quantities alongside a wide mix of other products in fleets of around five Venetian galleys (*galee grosse*) to the market at Bruges, and later Antwerp. Known as the Flanders galleys, these fleets are nevertheless casually referred

⁷ cited in João de BARROS, *Primeira Década*, liv. 4, cap. 1, p. 131, ed. Agência Geral das Colónias (1945).

⁸ from one of the earliest pieces of extant legislation dated 1273, reproduced in MARIN, *Storia del commercio de’ Venezia*, V, 295 ff. SCHAUBE thinks it likely that the goods were brought to the south of France by ship and thence by land to Flanders, ‘Die Anfänge der venezianischen Galeerenfahrt nach der Nordsee’, in Halikowski-Smith, Stefan (2001), *Portugal and the European spice trade, 1480-1580*, *Historische Zeitschrift*, 30, European University Institute

to in Venetian records as bound for the West (*per Ponente*), and indeed, a number of ships regularly branched off once the Channel had been reached to trade at Southampton. If the unit of trade was primarily that of the family enterprise, who responded in part to private orders from such clients as members of the English royal family, the fleet, or *muda*, was strictly managed as a public initiative. The galleys belonged to the Republic, and were placed under the command of designated captains (*capitani*), who were issued with set instructions or *commissioni*.⁹ A fixed number of crew of free men was stipulated, as was a requisite force of bowmen. The cargo carried was not to exceed 280.000 pounds, of which 120.000 was to be merchandise of *menu poids* such as spices. The fleet was granted a monopoly of trade on that route, though privately tendered *cocca* tended to and indeed were entitled to accompany the fleet. Finally, the convoy was hired out to private citizens (*cittadini originarii*) or a conglomeration or *societas* by way of public auction, the acts of which are called *incanti*, at the Rialto.¹⁰

Active marketing through a system of 'putting out' that we later see replicated in the Feitoria de Flandres was qualified by a parallel system that encouraged foreign merchants to come to Venice to buy their spices on payment of certain duties. By virtue of this traffic, Venice was to develop as an international entrepot rather than simply a passive point of passage, attracting large trading populations of Armenians, Greeks and Germans. Redistribution was free beyond the prohibition that Venetians themselves traffick goods anywhere outside the Republic. It has been suggested that this self-imposed commercial restriction was a concession made to the German Emperor in 1358 at the instigation of the city of Nuremberg following the defeat of the Republic by the combined forces of Ludwig the Great of Hungary and Charles IV, and in return for their acknowledgement of the Venetian trading monopoly in the Adriatic.¹¹ But it was clearly not a concession always viewed favourably by the German authorities. Emperor Sigismund waged what amounted to a trade-war (*Handelskrieg*) against Venice between 1412-33 with the purpose of reviving the

⁹ an illuminated commission appointing Cristoforo Duodo Captain of the Flanders Galleys in 1472 is reproduced opposite page 22, RUDDOCK, *Italian Merchants and Shipping in Southampton, 1270-1600*, from an original in the Bodleian Library archives.

¹⁰ A. SACERDOTTI, 'Note sulle galere da mercato veneziane nel XV secolo', *Bolletino dell' Istituto di Storia e della Societa Veneziano*, IV, (1962), 80-92.

¹¹ Henry SIMONSFELD, *Der Fondaco dei Tedeschi in Venedig und die deutsch-venetianischen Handelsbeziehungen*, Stuttgart (1887), vol. I, nr. 171-172. Also J. MONE, 'Der süddeutsche Handel mit den Ostindien', *Zeitschrift für die Geschichte der Oberrheins*, 5, (1864), 20-22.

traditional German trade routes with eastern Europe.¹²

From the Venetian perspective, it seems that there was also an affirmative rationale behind the prohibition on its citizens from re-distributive trade, a concern to positively discourage Venetian merchants from developing trading interests on the terra firma, for not only was it politically dangerous, but it might distract from maritime commerce, the city republic's true vocation, and the repository of her traditional might and glory. It has been suggested consequently that Venice promoted what amounted to a partnership with High German business, one that extended from the re-distribution of spices to co-operation in mining ventures in the Kingdom of Hungary.¹³ But if south German merchants - and, in the fifteenth century, primarily Nurembergers - were encouraged to come to Venice, and readily did so by a number of Alpine routes (until the mid-fifteenth century by way of the *obere Große Tirolerstraße* via Reschen-Scheideck and across the Fernpaß, and thereafter via Dobbiaco and across the lower, less steep Brenner pass) the strict regulations ensured that they were censored from bringing goods that might conflict with domestic production, and were encouraged to trade goods suitable for Venetian export, namely precious metals, which they were forbidden to sell to non-Venetians. In no circumstances might foreigners trade on from Venice. They were constrained to pay the customary duties, the *tola* or *dogana dell'intrada* and *d'insida* respectively (the latter was a flat 9% *ad valorem*), and take on a *sensal*, or official accountant, who took a ½% commission on all transactions. All spices were sold at strictly regulated prices.¹⁴

How did the two systems co-operate? In 1332, the Great Council ordered that carriage overland should be permitted only in case the sea-route should be unsafe.¹⁵ But it appears that henceforth the Venetian authorities were fighting a losing battle. Already in 1347, official documents were conceding the degree of prosperity trade had brought Venice's German visitors in recent memory: ‘.. maxime considerato fructu et comodo hic per eos de Norimberga diucius acquisito, quia vere dici potest quod de nichilo ad divinas maximas

¹² Hermann HEIMPEL, ‘Zur Handelspolitik Kaiser Sigismunds’, in *Vierteljahresschrift für Sozial- und Wirtschaftsgeschichte*, Bd. 23, (1930); Herbert KLEIN, ‘Kaiser Sigismunds Handelsperre gegen Venedig’, in *Aus Verfassungs- und Landesgeschichte. Festschrift für Theodor Mayer*, 2 Bd., Lindau-Kostanz, (1955).

¹³ Wolfgang VON STROMER, ‘Nuremberg in the International Economics of the Middle Ages’, *Business History Review*, XLIV, (1970), 216.

¹⁴ from a mid-fourteenth century letter of remonstrances quoted in full by A. FLEGLER, *Beziehungen Nürnberg-Venedig*, 329 ff.; original at Bayerisches Staatsarchiv Nürnbergs, Rep. 2a nr. 3735.

¹⁵ Carlo Antonio MARTIN, *Storia civile e politica del commercio de Veneziani, Vinegia*, (1798), V, 309.
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 European University Institute DOI: 10.2870/92585

evenerunt'.¹⁶ Paolo Morosini estimated in his letter to Gregor von Heymburg that the German *fondaco* in Venice was trading around one million ducats of merchandise.¹⁷ If the Venetian *muda* continued to make good trade in Flanders over the course of the fifteenth century, when they petered out at the beginning of the sixteenth they were very naturally superseded by German redistributive networks operating from the *Lagunenstadt*.

3.2 Spices and the Portuguese vision of Empire.

Spices, it has been written, were the Portuguese 'alchemy - the magic formula - which would make their discovery pay'.¹⁸ I think that there is every reason to transcend the instrumental and consider spices in the accusative, that it was spices themselves that the Portuguese were hoping to discover. This is how the anonymous author of the *roteiro* of Vasco da Gama begins his chronicle: 'In the year 1497, King Manuel, the first with such a name in Portugal, sent four ships to discover, which went in search of spices'.¹⁹

Indeed, from the 1470s the Crown was issuing decrees staking claims for rights to products that had yet to be discovered, and often existed only in the European imagination. Thus it was that malagueta, a pepper substitute of West Africa exploited commercially since the Portuguese had arrived in that part of the world, was mixed together with civet cats and unicorns, brazil wood, precious stones and other spices.²⁰

The Indies had long been understood in Europe to be the source of much of the world's precious spices. But beyond a rough appreciation of its geographical location, little was known of how spices grew and by whom. The area was situated very much on Europe's legendary horizons ever since the first commentators of antiquity such as Ktesias and Megasthenes, later Solinus and Pliny, wove fable into European knowledge of the products of the East, and there followed wonderful elaborations in the Middle Ages: natural orchards

¹⁶ SIMONSFELD, *Der Fondaco dei Tedeschi in Venedig und die deutsch-venetianischen Handelsbeziehungen* (1887), vol. I, nr. 127, 1347 (March 12, 1347).

¹⁷ Biblioteca Marciana, Venezia, Morosini, fol. 42a.

¹⁸ DIFFIE & WINIUS, *Foundations of the Portuguese Empire*, 406 ff.

¹⁹ 'Na era de 1497 El-rei D. Manuel o primeiro deste nome em Portugal mandou a descobrir quatro navios, os quais iam em busca da especiaria', *Diário da Viagem de Vasco da Gama*, vol. 1, ed. Liv. Civilização (1945), 3.

²⁰ decree of 1470 published in SILVA MARQUES, *Descobrimientos Portugueses*, vol. III, doc. 147. Unicorns figured in a number of trading manuals of the Middle Ages; PEGALOTTI suggests they were to be found in Gujrat.

blossoming the whole year round on a glorious mountain commonly understood to be the terrestrial paradise, a *hortus deliciarum* located just opposite Ptolemy's island of Taprobana and marked on medieval mappaemundi as a giant sub-continent sticking out into the Indian Ocean. Consequently, there is every reason to believe that the Portuguese Crown expected by sailing further east than had been contemplated hitherto, to come upon a place where it would suffice to stretch out one's hands and pluck what one fancied from these trees of limitless cornucopia or else, in the vision of the French knight Joinville, gather the leaves and fruit from the great rivers that gushed forth from the same mount. At any rate, the Portuguese were under the impression that spices grew without cultivation; other reports suggested they could be had for the asking.²¹ Otherwise, initial Portuguese expeditions along the western coast of Africa in the 1440s prior to the slaughter of Gonçalo de Sintra on Arguim island only go to show how much the Portuguese had envisaged paying for their expansion by means of the raid, kidnapping and plundering for booty through sheer force of arms; even what could not be so easily carried off could be exploited by teams of freely availed slaves.

Although a certain quantity of spices was regularly secured as tribute coerced from petty Indian potentates (in Ceylon, for example, it amounted to 400 bahars of the smaller measure or roughly 1000 quintals a year) the first direct reports from India - most probably the epistle of Pêro da Covilhã personally delivered to the King by José de Lamego, though Correia speaks of some letters sent by a rich merchant of Venice to D. João II giving him a 'rich account of India and of its commercial wealth provenant from trade' (*larga conta da Índia e de suas grandes riquezas de tratos*) - immediately forced the Portuguese Crown to consider in more realistic terms how it might go about exploiting the potential lucre in terms of a trading relationship, and how that might square with its grand projects of first, outflanking the Moor and orchestrating an historic Portuguese victory for Christendom, and second, developing these newly discovered territories as patrimony of the Crown.²² Expressing his plans in a letter sent to the King and Queen of Castile in July 1499, Dom Manuel intimates, on the subject of the spice trade:

²¹ thus, early Portuguese commentators made a point of emphasising that spices had to be managed - see, for example, the letter of Jeronimo de Santo Estevam in Francisco Maria Esteves PEREIRA ed. *Marco Polo - O Livro de Marco Polo - O livro de Nicolão Veneto - Carta de Jeronimo de Santo Estevam*, printed by Valentim Fernandes (1502) and re-ed. Lisbon (1922), fl. 96v; Alvaro Velhos's account of Vasco da Gama's first trip to the Indies relates how, on the island of Mozambique, Gama's men watched the incoming fleets of the 'Moors' from the Indies and were told that 'the stones, seed-pearls and spices were in such abundance that it was not necessary to bargain for them: they were collected in full baskets', *Voyages de Vasco da Gama*... ed. Paul Teyssier & Paul Valentin, Paris: Chandeigne (1995), 108.

²² Covilhã's travels are reported by Fernão Lopes de CASTANHEDA, *História do Descobrimento e Conquista da Índia pelos Portugueses*, (1551), liv. I, cap. I; G. CORREIA, *Lendas da Índia*, ed. Lisboa, 1859-66 I, 9.

We hope, with the help of God, that the great trade which now enriches the Moors of those parts, through whose hands it passes without the intervention of other persons or peoples, shall, in consequence of our regulations (*ordenanças*) be diverted to the natives and ships of our own Kingdom, so that henceforth all Christendom, in this part of Europe, shall be able, in a large measure, to provide itself with these spices and precious stones.²³

Now, if the Crown genuinely set out with the intention of sharing trade with private domestic interests, it rapidly became apparent that it would have to provide the lead and incentive for a viable transoceanic commerce. Here we have one of the foundation stones of the Portuguese imperial system, what became elaborated into the *Carreira das Índias*, an annual fleet laid on by the Crown that would make the lengthy round trip around the Cape to the western coast of India and would serve as the physical link between Portugal and her emergent territories overseas, the life-line along which settlers, information and trade in spices would be conducted. There was never really any thought given to the idea that trade be spearheaded on a direct course through the Levant, even in the wake of the taking of Ormuz when it appeared that the Portuguese would become masters of the Red Sea. The efforts of the Portuguese ambassador at Rome, Lourenço Pires de Távora, to secure the cooperation of the Porte in a project to send spices through to Alexandria at the end of 1563, as Subrahanyam would like to argue, was only ever intended as a duty-earning and conciliatory measure to facilitate distribution across the Arab world and was in no case considered a challenge to Portugal's mainstay Cape route supply of the European market.²⁴ For one, sending Portuguese vessels to pick up spices in the ports of the Levant would have set the Portuguese on a collision course with the Venetians who, as we have seen, traditionally enjoyed the monopoly on trading relations with that part of the world. But there was also a more affirmative reasoning; the *Carreira* was the thread by which all imperial territories were linked.

Such a far-reaching enterprise as the *Carreira* was put on its feet on the strength of a

²³ original in A.N.T.T. Collecção de S. Vicente, t. III. fol. 513, published in *Alguns Documentos* (1892), 96. The translation is provided in *A Journal of the First Voyage of Vasco da Gama, 1497-99*, ed. E.G. Ravenstein, Hakluyt Society, London (1898), Appendix A (i).

²⁴ SUBRAHANYAM, *ibid.*, 76 drawing on CALADO ed., 'Livro que trata das Coisas da Índia e Japão', *Boletim da Biblioteca da Universidade de Coimbra*, 24. The negotiations are reported in a couple of letters dated December 7 and 8, 1563 sent to the Viceroy of Naples by a Spanish secret agent at Constantinople, Simancas E° 1053, f° 10. LANE, *The Mediterranean Spice Trade...*, 584-5 and in the same vein BRAUDEL, *The Mediterranean...*, 554 considered that Pires' proposals amounted to Portuguese connivance with the realities of the resurgence of Levant trade and the bankruptcy of the Portuguese Atlantic route - 'the revenge of Venice and the Mediterranean'. In fact both historians read too much into the lingering paranoia of a Venetian diplomatic report produced four years later, the *relazione* of Daniele Barbarigo reprod. in *Le Relazioni degli ambasciatori veneti*, VI, 6.

certain assumption, that transporting spices back to Europe by way of the Carreira would at least cover its expense, the reasoning being the elimination of intermediary costs. Martin Behaim's globe had demonstrated how spices passed through twelve sets of hands between producer and consumer; his inscription on the spice trade concluded: 'let the high Customs duties and profits be borne in mind, which are levied twelve times upon the spices, the former amounting on each occasion to one pound out of every ten'.²⁵ Priuli, if he adopted a different set of calculations, made the same point: on their passage across the Levant, spices 'in each place paid the greatest obligatory duties (*angarie*). . I mean that which cost a ducat was multiplied by [these duties] to 60 ducats and perhaps 100'.²⁶ Thus, without going so far as the most rudimentary cost-benefit analysis, it was assumed that the Carreira das Indias would, by reducing the number of transactions and eliminating the payment of costly tolls and tributes to foreign parties, bring in those same savings to the Crown. Afonso de Albuquerque, Governor-General of the Estado da India between 1509-1515, strongly supported this scheme for the financing of the Portuguese Empire: 'and if Our Lord approves that the India trade is managed in such a way that its riches travel each year in our fleets, then I do not believe that there will be a king as rich as Your Highness in the whole of Christendom' (*e se a nossa Senhor aprover que o negocio da India se disponha em tal maneira que o bem e riquezas que nela ha vos vão cada ano em nossas frotas, não credo que na Cristandade haverá rei tão rico como Vossa Alteza*).²⁷ Fleets, subsequently, were sent out once a year for the next 150 years, and expected to return with a cargo of around 35.000 quintals of spices eighteen months later. Even when it became apparent that the same spices could be sold more profitably elsewhere in Asia, what developed into the so-called country trade, there was never any question that it should replace ferrying the spices back to European markets on the Carreira das Indias. The Carreira da Indias carried the King's authority to the colonies just as its return, loaded with spices, ensured that the Crown saw a good share of the profits of Empire.

The geographical distribution of spice cultivation shaped the developing physiognomy of Empire for at least the next half century (see Map 1). On their arrival in the emporia of

²⁵ purportedly the words of one Bartolomeo Fiorentino, indicated in a legend on Martin Behaim's globe (1492) dedicated to the spice trade, cited and translated by RAVENSTEIN, *Martin Behaim*. ., 89-90.

²⁶ 'in ogni locho pagavano angarie grandissime.. voglio dire che, quello costava uno ducato, multiplicava per questo a ducati 60 e forssi 100', cited in Carmen RADULET, 'Girolamo Sernigi e a importância económica do Oriente', *Revista da Universidade de Coimbra* (1985), 156.

²⁷ Letter to Dom Manuel, April 1, 1512, in *Cartas*, I, p. 34.
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the western coast of India, the Portuguese were informed through Chinese and Arab traders of the sources of many of the 'fine spices', drugs and precious stones in Ceylon and lands further to the east, and of the great emporia like Malacca (commonly understood to be an island) where they were widely traded at a fraction of the prices reached on the markets of Calicut. This clarified, but also confirmed information that had already reached Europe through medieval reports and missions, the most popular and recent of which were those of Marco Polo and Nicolò de Conti, and through the latter, Pero Tafur.²⁸ Thus, having ascertained which were the ports on the Malabar coast which offered the most favourable terms of acquisition of locally produced spices, the Portuguese pushed out, first to Ceylon, eight days' sail from Calicut, which was understood to be the principal source of high quality cinnamon and a land of precious stones. A fortress was constructed in Colombo in 1518 and the whole island brought into suzerainty with an annual tribute payment of a certain quantity of cinnamon under the watchful eye of a Portuguese governor. *Capitanias* were later instituted at Cota, Manar and Jafanapatão.

A German report mentions plans for the 1506 Cunha fleet to sail on to Malacca (*Mellicka*), the great emporium of trade in the Far East and point of purchase of many of the most precious drugs and spices, cloves and nutmeg, but also musk and benzoin, that did not grow in India.²⁹ The Portuguese had famously estimated that 'Whoever is Lord of Malacca has his hand on the throat of Venice' (*quem for Sor de Malaga tem a maa na garganta a Veneza*).³⁰ In the event, the capture of Malacca was delayed until 1511, though once taken immediately served as springboard for the establishment of direct trading relations with the sources of fine spices in the outlying archipelagos.³¹ These were the clove producing islands of Ternate, Tidore, Maquiem, Motir and Bachão that ran along the west coast of the larger island that is today Halmahera in the northern Moluccas, and the six small nutmeg growing Banda islands south of Amboina in the Banda Sea, of which awareness had been dim indeed

²⁸ *Roteiro da viagem que fez Vasco da Gama*, 88, 109; nutmeg and mace from the tiny Banda islands were re-exported by the Portuguese from Malabar as early as 1501, SANUTO, *op. cit.*, tom. IV, col. 69; tom. V, col. 130.

²⁹ *Den rechter veg auß zu fahren von Lißbona gen Kallakut vō meyl zu meyl*, translated as *From Lisbon to Calicut*, Alvin E. PROTZENGEIER, Minneapolis (1956), 30

³⁰ T. PIRES, *Suma Oriental*, II, 285.

³¹ The taking of Malacca is officially described by J. BARROS, *Década de Asia*, III. 584, and in two documents, the 'Lettera di . . . scripta in Lisbona e mandata a fra Zuambatista in Firenze a'dí 31 genaro 1513, et aviso delle cose de India per la presa di Melacha citá' & the 'Epistola dil Re di Portogallo delle victorie havute in India di Malacha et altri lochi al S. in Cristo padre papa Leone X pontefice', both held in the Codice Strozziiani, Fondo Magliabecchiana, Biblioteca Nazionale, Florence.

and complicated by the confusing insular topography of that part of the world, but tentatively depicted from the time of Fra Mauro's mappaemundi on the basis of reports from Nicolò de Conti.³²

The Asian centres of spice cultivation, then, were systematically discovered and brought together by the Portuguese into a web of trading *carreiras*, articulated through a hinge at Cochin, which remained the point of commercial connection with Europe. Initially, the *carreiras* were exclusively supervised by the Crown, but were gradually rented out or given up to imperial captains in lieu of salary as concessionary voyages, starting with the minor ones. As I have tried to show with the map reproduced opposite, spices were the primary motivation in this expansionary thrust into the Indian Ocean world east of Cape Comorin. Even the Portuguese diplomatic mission to China was led by the *feitor das drogarias* Tomé Pires, whose nomination, the chronicler Castanheda informs us, was made on the understanding that he was 'discreet and eager to learn, and because he would know better than anyone else the drugs there were in China'.³³

3.3. The managing institutions of the Portuguese imperial economy.

The Casa da Índia was the control centre of the administrative and economic workings of the Portuguese Empire. Brought from Lagos to Lisbon in the reign of João II (1481-95), this centralised imperial bureaucracy was established categorically as the Casa da Índia e Mina under a head scribe (*escrivão*) from 1499, whose charge was amplified into that of factor or *feitor da Casa da Índia* as from 13 September, 1501.³⁴ After a period of rapid imperial expansion, the Casa was subdivided into three sections: one dealing with India, the other with Guinea and pre-eminently the running of the slave trade, the third a legal office for examining and approving legal documentation and prosecuting thefts and crimes committed during voyages or in the Casa. The division of competences within the institution

³² G.R. CRONE, 'Fra Mauro's representation of the Indian Ocean and the eastern islands', *Studi Colombiani*, 3 vols., 60. Conti had related the provenance of cloves to the islands of *Sandai* and *Bandam*, which are in fact two different groups: Sunda and Banda.

³³ cited by Armando CORTESÃO in his introduction to Tomé PIRES, *The Suma Oriental*, 2nd ser., no. LXXXIX Hakluyt Soc., London (1944), xxvii.

³⁴ the royal decree (*carta régia*) of September 1501 has been transcribed by F.P. Mendes da LUZ, 'Dois Organismos de Administração Ultramarina no século XVI: A Casa da Índia e os Armazéns da Guiné, Mina e Índias', in Teixeira da MOTA, *A Viagem de Fernão de Magalhães e a Questão das Molucas*, Lisboa, Junta de Investigação Científicas do Ultramar, (1975) 97-8.
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was fully codified in the *Regimento* of 1509.³⁵ Attached to the Casa was the Ribeira das Naus, the shipyard on the waterfront where the Crown fleet was constructed and subsequently moored, and the warehouses (*Armazens*), where a variety of naval supplies, ship's provisions and trading goods were stored under guard.³⁶

The Casa da Índia e Mina was created for and owed its authority entirely to the Portuguese Crown. Expected to operate in close conjunction with the highest level official responsible for the management of the King's patrimony, otherwise known as the *vedor da fazenda*, we are to understand that the King himself made personal visits as often as once a day to the Casa at its site on the banks of the Tagus estuary at what was to become the Praça do Comercio.³⁷ The institution administered the King's exclusive rights to the navigation, trade, and occupation of the lands, seas and islands newly discovered by the Portuguese and ratified in the two papal bulls of 1455 and 1481.

The King was officially represented in these far-flung territories that were granted political form with the creation of the Estado da Índia by a Viceroy appointed for a tenure of approximately six years. The Viceroy's administration, conducted by a *secretário*, an *ouvidor-geral* and three *vedores de fazenda*, was counterposed by the *feitorias* or factories, subsidiary institutions of the Casa da Índia operative across the four continents of the nascent empire. Inevitably power was contested between these two rival institutions overseas, the viceroyalty and the factory, the first the guardian of the empire's political interests, the second the empire's economic functioning, with frequent recourse to ultimate arbitration, the King in Lisbon.

The factories were essentially trading stations of between five to fifteen permanent staff. They were encharged by the Casa da Índia with a variety of tasks that promoted the efficient and profitable running of the incipient Empire along administrative and economic lines. Military security and territorial consolidation were very much the tasks of the viceroyalty, though in some of the more remote parts of Asia and on the Brazilian coast these too were delegated to factories set up as semi-autonomous units of government and which held

³⁵ published by Damião PERES, *Regimento das Casaz das Índias*, (1947) from the Biblioteca de Marinha.

³⁶ D. de GOÍS, *Chronica do Rey Emanuel*, pte. IV, cap. 65, 153; M.G. COUTO (1932), 55.

³⁷ what is the distinction between the *vedor* and the highest court official, the *secretário do rei*, whom we are to understand replaced the *escrivão da puridade* at some point in the reign of Dom João II? A. BAIÃO, H. CIDADE, M. MÚRIAS, *História da Expansão Portuguesa no Mundo*, (1937-40), 3 vols., 74.

The chronicler, Gaspar CORREIA described the King's visits as following: 'e por que o aposento do rei era nos paços do castelo de Lisboa, e folgava de der presente e ia e vinha cada dia nas casas dos armazens. entendeu em mandar fazer casas para seu aposento nos mesmos armazens em que se fizeram nobres palácios e debaixo deles grandes casas para recolhimento e feitoria das mercadorias da Mina e da Índia', *Lendas da Índia*, ed. Rodrigo de Lima FELNER, tomo I, 529, Lisboa (Academia Real das Sciencias, 1858).

out until a settlement-based colonial system was instituted.³⁸ The *feitoria* system was crafted in Europe - the first nominated factor in Cochin in 1502, for example, was Diogo Fernandes Correia, who had previously served in Flanders - wherever imperial economic interests needed administrative representation, though here the *feitoria*'s function tended to be considerably more specific. A *feitor* was already active at Rome in 1497, if we are to go by a sale of sugar recorded in a letter of quittance (*carta de quitação*).³⁹ The Feitoria de Andaluzia fulfilled the essential task of purchasing the cheap Castilian grain desperately needed for the upkeep of the *praças* or military strongholds in Morocco.⁴⁰ And, as we shall see, the Feitoria de Flandres at Antwerp functioned in large degree as an exclusive sales outlet for the Portuguese spices in Crown hands.

The point of this section, then, has been made: that the policy of the Portuguese Crown was orchestrated through a central institution, the Casa da India, that was responsible for the supervision of the imperial project as a whole. European re-export policy was subsumed into the imperial administration. The *feitor* de Flandres, as the Regimento of 1509 reminds us, was no different from his colleagues from 'anywhere else' (*quesquer outras partes*), for both 'belong to the said trades of Guinea and the Indies (*pertenção aos dittos trautos de Guiné e Índias*). Portuguese re-export, then, was as much a function of the dynamics of the Portuguese imperial structure as it was a product of the realities of European commerce.

Portuguese trading policy for oriental spices.

Vasco Da Gama's fleet, the first to return from India loaded with spice, sailed up the Tagus on August 29, 1499. Although the cargo it carried was small, not more than six tons of pepper, the portent of this arrival, the navigational breakthrough that it heralded, was felt on all sides. Those who desired Venice's downfall, like Guido Detti, rejoiced at the prospect of the city's abandonment of the Levantine trade, suggesting that they would have to 'become

³⁸ M. MÚRIAS, 'A política das feitorias', *Boletim Geral das Colónias*, ano XII, no. 131, Lisboa (1936), 84; see John L. VOGT Jr., *Portuguese Exploration in Brazil and the Feitoria System, 1500-1530: the First Economic Cycle of Brazilian History*, PhD dissertation, University of Virginia (1967).

³⁹ *A.H.P.*, vol. IV, 476.

⁴⁰ Manuel H. CORTE-REAL, *A Feitoria Portuguesa na Andaluzia, 1500-1532*, Lisbon (1967).
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fishermen'.⁴¹ The atmosphere in Venice itself shifted from disbelief to the blackest despondancy. With the success of the subsequent voyage led by Cabral, Sanuto foresaw 'the ruin of the Venetian city'.

I would like to investigate the way in which the Portuguese Crown aspired to cash in on these windfalls, through what kind of channels the spices were to be released on to the European market, how it was thought the market would react. In short, with the rapid accumulation of these spices hauled back to Lisbon by a number of fleets in quick succession, I am hoping to distinguish the emergence of a sales policy. Authors like Marques Almeida have nevertheless been quick to point out the pitfalls of trying to trace policy, a fixed corpus of official opinion, in the bedlam of a pre-modern autocratic mind. In his opinion, 'business strategy. . . functioned badly, or was even inexistant' (*a estratégia de negócios.. funcionava mal, ou era mesmo inexistente*).⁴² Jaime Cortesão has argued in similar fashion that the trading system was not purposefully constructed as a system, but simply pragmatically adjusted to prevailing realities.⁴³

3.4 Hopeful beginnings: open trade between Empire, metropole and Europe.

It seems unlikely that the Crown ever forcefully desired an active Portuguese redistributive policy, and initially promoted Lisbon as the place at which European redistribution of Portuguese spices should take its head. A very natural decision may it seem, but one undoubtedly influenced by the King's consuming sense of rivalry with Venice and his idea that Lisbon should become an emporium to match that of the city of the Doges. What he had in mind almost certainly went further still. According to Giovanni Camerino's (Il Cretico) report sent from Lisbon 26 June, 1501, the King was keen to instruct the Venetian Doge that his galleys should henceforth make the journey to the warehouses in Lisbon and be encouraged to establish there a *fondaco* or trading post. There was more here than a wish to underline the change-around in the client-supplier relationship for political effect; the King clearly envisaged the beginnings of a propitious and exclusive commercial partnership between Christian Portugal and Venice at the expense of the sultan:

⁴¹ letter of 10 August 1499, reproduced in *Voyages de Vasco da Gama. Relations des expéditions de 1497-99, & 1502-03*, ed. Paul Teyssier & Paul Valentin, Paris: Chandeigne (1995), 183-188.

⁴² A.A. MARQUES ALMEIDA, entry under 'Antuérpia' in Luis de ALBUQUERQUE, *Dicionario dos Descobrimentos Portugueses*.

⁴³ J. CORTESÃO (& D. LOPES), 'Domínio Ultramarino', vol. 4, 20 of Damião PERES, *História de Portugal, Barcelos: Portucalense (1929-32)*.
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and he told me that I had to write to Your Highness that your galleys should be sent from now on to pick up spices from here, that he would be happy to see this, that you could consider yourselves to be at home, and prevent the Sultan from getting his own spices [...].⁴⁴

The Portuguese monarch was not alone in his conviction that Lisbon would become a focal point of commercial activity as far as the European spice trade was concerned, though the Venetian diarist Girolamo Priuli was less excited by the prospect of the political damage a commercial partnership between Portugal and Venice might cause the infidel. Indeed, he gives no hope that the idea would ever be entertained from any quarter in Venice, and prefers to make the gloomy prediction that Venice would be left squarely in the cold by the turn of events and that the benefits of trade would accrue entirely to third parties. For he was convinced of the facility and convenience of trade, not to mention the cost savings that Lisbon would offer over Venice:

I have no doubt that the Hungarians, German, Flemish and French and all *oltremontani* which used to come to Venice to buy spices with their specie, all will now turn to Lisbon for it being more propitious to all nations and easier to take [the spices] away and furthermore to enjoy a better market.⁴⁵

Redistributive trade, then, was not initially an issue for the Portuguese Crown. Even once it became clear after repeated overtures from the Portuguese that the Venetians would not come running to systematically relieve them of European re-export, indeed would rather subvert the entire Portuguese presence in the Indian Ocean through a hostile alliance with the Sultan, the Crown left clearance to the free market; spices were left to filter down organically to their consumers contingent on the payment of certain standard trading duties (*císa* and *dízima*) on entry and exit from the port of Lisbon.⁴⁶ This both conformed to the tradition of commercial organisation on the Lisbon trading axis with northern Europe and stood in line with the regulations governing trade on the Indies leg announced in June 1500, which

⁴⁴ 'et disseme dovesse scriver a la Serenità Vostra che la mandi da mo' avanti le sue galie a levar spetie de qui, che li faria bona ciera, et poriano iudichar esser in caxa sua, et prohiberia al soldano non anderia spetie [...]', Girolamo PRIULI, *I Diarii*. ., Città di Castello (1912), II, 155.

⁴⁵ 'non ho dubio che li Ongari, Todeschi et Fiandra et Francexi et tuuti oltremontani, che sollevano venir a Venetia a comprar spetie cum li sui danari tutti si rivolteranno verso Lisbona per esser piui propinquo a tutti li laexi et piui facili a condurli et perche *etiam* averanno miglior merchato'; in PRIULI, *I Diarii*. ., (1912), II, 156.

⁴⁶ PRIULI's account suggests that these overtures were made in the period immediately preceding August 1504: 'fazeva intendere continuamente al dominio veneto, che lui era presto farli ogni partito et darli queste spetie [...]' *I Diarii*, II, 352.
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permitted private individuals or groups to send their own licensed trading vessels to India with payment of a quarter of the cargo *ad valorem* to the Crown and a further 5% (*vintena*) 'to God', that is, for the construction of the monastery to Nossa Senhora at Belém, by way of duties.⁴⁷ No distinction was drawn between Portuguese and foreign nationals as far as the licensing was concerned so long as they were resident in Portugal, even if the King's wish, as we can extrapolate from the King's letter to the Spanish Crown in July 1499, was that the trade 'be diverted to the natives and ships of our own Kingdom'. So long as the units of foreign participation were limited to private individuals or groups, for the policy of exclusion was intended that 'none other princes should intermeddle therewith', the Portuguese King would be happy to accommodate them in the Indies trade.⁴⁸

Thus private vessels, pre-eminently those of foreign trading companies, were rigged up to sail in convoy with the Portuguese warships and brought back whatever goods and in whatever quantities were desired. Trading agents like Giovanni da Empoli and Matteo da Bergamo were sent out east for the large trading companies, and returned with valuable comment and commercial samples destined to fuel further the European business interest for oriental trade.⁴⁹ Alongside this were made certain 'sleeping' investments, capital investments, such as that of the Affaitadi in Vasco da Gama's second fleet to the Indies, which returned at the beginning of September 1503 and which, despite ill feelings over the Crown's immediate seizure of the best of the incoming spice as its due portion, nevertheless made the

⁴⁷ *Corpo Cronologico*, pte. I, m. 3, doc. 20. Later it seems the *vintena* was raised to a 10% duty (*dízima*), see Gaspar CORREIA, *Lendas da Índia*, ed. Rodrigo de Lima Felner, Lisboa (1859-66), 147-.

⁴⁸ as explained in *The booke made by the right worshipful M. Robert Thorne in the yeere 1527. in Sivil to Doctour Ley, Lord Ambassador for King Henry the eight, to Charles the Emperour, being an information on the parts of the world, discovered by him and the king of Portingal etc.*, reprinted in HAKLUYT, *Everyman's Library* edn., repr. 1926, vol. 1, 223. Meanwhile, the penalty for unlicensed voyagers caught by the Portuguese Crown in waters it laid claim to was severe: it was expected that the Fleming Eustache de la Fosse, caught off the west coast of Africa around 1479-80, would face capital punishment. Eustache de la FOSSE, 'Voyage à la côte occidentale d'Afrique, en Portugal et en Espagne, 1479-80', ed. Raymond Foulché-Delbosc, *Revue Hispanique*, IV, (1897), 174-201.

⁴⁹ Giovanni da Empoli sailed from Lisbon in April 1503 with the Albuquerque fleet. His account is in RAMUSIO's *Navigazioni e Viaggi*; his biography is otherwise traced in *Archivio storico italiano*, Appendix to t. III, 25 ff. Matteo da Bergamo wrote two letters whilst representing the Affaitadi in the fleet of 1502, which were published by Prospero PERAGALLO, 'Viaggio di Matteo da Bergamo in India sulla flotta di Vasco da Gama (1502-1503)', in the *Bollettino della Società Geografica Italiana*, (1902), vol. III, 4th series, 98-110, 110-124 and have been recently translated into French in *Voyages de Vasco da Gama. Relations des expéditions de 1497-99, & 1502-03*, ed. Paul Teyssier & Paul Valentin, Paris: Chandeigne (1995), 319-340.

Affaitadi a return of 5000 ducats from an outlay of 2000.⁵⁰

Legislation protective of national shipping interests (see section 4.5.) was gradually bypassed by ever more generous sets of privileges to foreign parties to the point that they too were granted the same set of rights as Portuguese nationals. In 1470, for example, Florentine and Genoese were told they were to: ‘benefit from the prerogative and privilege. . . that our (sic) countrymen’s *naos* and ships benefit from as against the ships and *naos* of foreigners’.⁵¹ Only the island sugar trade, after concerted lobbying, was in some ways restricted to national freight.⁵² But on the whole, foreign participation was warmly encouraged in Portuguese trade, as demonstrated by an unprecedented letter of privileges negotiated by a High German delegation under Simon Seiz and Loewenstein sent to Lisbon early in 1503 and granted on February 13 for a period of fifteen years. All customs duties were waived on incoming foreign shipments of spices and brazil wood from Portuguese overseas territories, as was the case similarly for silver ingots imported into the kingdom. A reduced 5% customs tariff was waged on a wide range of other imported products, chiefly metals and shipbuilding materials such as tar and ships’ masts. Meanwhile, Indian goods exported from Lisbon, and from 1509 only pepper, were levied a five percent export duty.⁵³ It is not clear, but this set of privileges may well have transcended those rights that even

⁵⁰ reported in a letter João Francisco Affaitati sends to his brothers Luca et al. in Cremona on September 14, 1503. In SANUTO, *Diarii*, V, 133 ff.

⁵¹ ‘gouviam [goziam] da perroguativa e privilegio.. que gouern as naos e navios dos nossos naturaes comtra os navios e naos dos outros estrangeiros’. The text of the royal decree of 1470 privileging Genoese and Florentine trading vessels is in Virginia RAU, ‘Privilégios e Legislação Portuguesa Referentes a Mercadores Estrangeiros (Séculos XV e XVI)’, 28, note #23, in KELLENBENZ ed., *Fremden Kaufleute auf der Iberischen Halbinsel* (1970).

⁵² see the clauses relating to ‘os direitos das nossas ilhas’ included in the privilege of 30 August, 1509, in DENUÇÉ, *Privilèges commerciaux accordés par les Rois de Portugal aux Flamands et aux Allemands*. Initially, foreigners operating in the sugar trade were obliged to ship as far as Lisbon on Portuguese freight: this applies, for example, to the *burgalezes*, A.N.T.T. Chanceleria de D. Manuel, bk. XVII, fol. 29, and to Jakob Groenberg, c. 1506-7. It seems, however, foreign shipping started to be permitted so long as it passed via Lisbon, where a discriminatory rate of duties was levied on non-Portuguese freight. Only that the cargoes of sugar were bought up by outgoing Flemish vessels before entering port, so as to avoid payment of such duties. From the *Livro de Caixa*, Arquivo Plantin-Moretus, Antwerp and Eddy STOLS, *Anais*, 14. The same thing evidently was done by Germans who bought shipments of *pau brasil* from Loronha, A.N.T.T. Chanceleria de D. Manuel, bk. 22, fol. 25. Portuguese shipping, which was much used by the Florentine contingent in Lisbon, and in some cases owned by the larger firms like the Marchionni and Guidetti, was given license to sail directly from the islands to foreign destinations. Federigo MELIS, ‘Di alcune operatori economici fiorentini attivi nel Portogallo, nel XV secolo’, in KELLENBENZ, *Fremde Kaufleute*, 68.

⁵³ A.N.T.T., Chanceleria de D. Manuel, bk. 22, fol. 25, and thoroughly covered by Jean DENUÇÉ, *Privilèges commerciaux accordés par les Rois de Portugal aux Flamands et aux Allemands*. These preferential clauses were carried over for a further fifteen years from August 30, 1519. See Hermann A. SCHUMACHER, *Die Unternehmungen der Augsburger Welser in Venezuela (eine deutsche Episode in der Entdeckungsgeschichte Amerika’s) und Juan de Castellanos (ein Lebensbild aus der Conquista-Zeit)*, Hamburg: Friedrichsen, (1892).
Haikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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Portuguese nationals were to enjoy.

Henceforth, this set of privileges served as the standard for any prospective foreigner seeking benevolent adjudication from the Crown in affairs relating to Portuguese trade. The *estrelins* of the Hansa successfully campaigned that they too be considered as *alemães* for the purposes of trade concessions; similarly, the *contratador* of the Sierra Leone trade (*trato de S. Lioa*) Diogo de Haro, having lost his ships to pirates off the West African coast, demanded to be treated as a German with respect to his compensation rights.⁵⁴ Lucas Giraldo was granted a German's privileges for the purposes of his slave trading enterprise with the New World.⁵⁵

What was the significance of these privileges? Vicente Carneiro, writing in the King's name, expressed the conviction in 1503 that such measures 'with the help of Our Lord' (*com ajuda de noso Senhor*) would attract the foreign merchants to Lisbon 'to do business there and to set up trading agencies for the spice trade' (*pera nella trautarem e asentarem casas pera o trauto da especiaria*).⁵⁶ The King was clearly giving up on the idea expressed in the letter to the Spanish Crowns of 1499, that the trade should be 'diverted' to his subjects.

3.5 Capitalismo Monarquico: the concurrent system of Portuguese crown trade.

Alongside the free private redistributive regime sketched out, the Portuguese Crown sold spices on its own behalf. As early as 1503, a sale to Nicolaas van Rechterghem was settled by a factor of the Portuguese King in Antwerp.⁵⁷ This same factor forwarded a shipment of Portuguese spices - the first such - to the English Channel port of Falmouth in January 1504.⁵⁸ This raises two significant issues: that the King marketed actively from

⁵⁴ DÜRRER, *As Relações Económicas entre Portugal e a Liga Hanseatica desde os últimos anos do século XIV até 1640*, Diss. de Licenciatura, Coimbra (1953), 53, taken from Livro 20 do Registo Geral da Câmara Municipal do Porto, 70-97; J. DENUCE, *L'Afrique au XVIe siècle et le commerce Anversois*, Antwerp (1937/38), 37. De Haro was at the forefront of the *Burgos consulado*, which had already been granted a list of privileges very similar to that of the Germans, see 27 April and 18 September 1510, A.N.T.T., Livro de Místicos, fls. 100b & 105v; Chancelaria de D. Manuel, liv. 17o, fl. 29.

⁵⁵ see A.N.T.T., Chanc. de D. João III, liv. 45, fl. 51 v.

⁵⁶ letter dated 22 Feb. 1503, A.N.T.T. Chanc. de D. Manuel, liv. XXXV, fl. LIII.

⁵⁷ GUICCIARDINI and MERTENS & TORFS, *Geschiedenis van Antwerpen sedert de stichting der stad tot onze tijden*, Antwerpen: Buschmann (1845-54), III, 330.

⁵⁸ mentioned in a letter of 17 January 1504 from Hironimo di Ca' da Pesaro announcing the arrival at Falmouth of five Portuguese *barks* bearing 380 tons of spices from Calicut. The *Calendar of State Papers. Venetian*, vol. I, no. 838, p. 300 and dated March 9, 1504, ed. R.H. Tawney and E. Power, *Tudor Economic Documents* (London, 1924) section 1, ('Commerce and Colonisation'), #7.
Hankovsek, G. and S. (2001), Portugal and the European spice trade, 1480-1580

Antwerp rather than Lisbon; that sales were not left simply to the hand of the market, but were also fruits of clear royal intervention. So, we have an atmosphere of open trade in which the Crown itself took part. But what was the King marketing, precisely? He was marketing his personal share of the goods, which had been paid in as duty by private parties on top of the goods his warships had brought him back and that had not been purchased in advance by passive investors. Such an arrangement was not exclusive to the spice trade. In 1510, for instance, ships from Lisbon, the Algarve and other ports arrived charged with sugar, which the factor himself hoped to sell at a good price ‘*pollos poucos que ha na terra*’.⁵⁹ A decree of 1498 maintained that precisely a third of a stipulated 120.000 arrobas to be produced on the island of Madeira was to be put aside *para carregar por conta sua*.⁶⁰ Rights to sugar had been one of the mainstays of Portuguese Crown revenue during the second half of the fifteenth century, and had undoubtedly been the inspiration for the extension of *capitalismo monarquico* to oriental spices. Sugar was brought to Flanders where it was used to settle state debts, as in the case of Dona Leonor’s dowry, and was on occasion presented to Crown officials as tribute, a kind of non-salaried bonus, or to convents as a charitable donation.⁶¹

Straightforward as this might seem, active trading pursued by the Crown was by and large a unique phenomenon in early modern Europe. Goris finds Charles V only ever making one single intervention in the Indies trade on his own account, and ascribes this to religious scruple.⁶² It seems that the epithet *le roi épicier* with which the French king referred to his Portuguese peer Manuel was tinged with scorn. The Portuguese monarchy can’t have been invulnerable to disdain even from within ranks; it was widely commented how steadfastly the Portuguese nobility distanced themselves, *que não podem ouvir falar em tal, tendo por gente vilíssima os mercadores*, while Doutor Frei Amador Arrais, the Bishop of Portalegre, openly condemned the King for reducing himself to the role of merchant in his *Diálogos*, published in that untempered centre of scholastic learning, Coimbra, in 1589.⁶³

⁵⁹ letter sent from Antwerp by João Brandão to Dom Manuel, 10 November 1510; published by Braamcamp FREIRE, ‘*Maria Brandoa a do Crisfal*’, in *Arquivo Histórico Portuguez*, t. VII, 65, no. XXII.

⁶⁰ *Descobrimientos Portugueses*, vol. III, no. 423, 488 ff.

⁶¹ contract signed in Santarem, 8 October, 1487; SOUSA VITERBO, *Artes industriaes e industrias portuguesas: a industria sacharina*, Coimbra, Imprensa da Universidade (1908), 9, 11.

⁶² GORIS, *Etudes sur les colonies marchandes...*, 245.

⁶³ comments of the Venetian ambassadors Tron and Lippomani, who came to Portugal in 1580. cited by A. HERCULANO, *Opúsculos*, vol. IV, 5th ed., 122; equally those of E. Duarte GOMES SOLIS, *Alegacion en favor de la Companhia de la India Oriental. comercios ultramarinos, que ne nuevo se instituyó en el Reyno de Portugal*, (1628), 52 ff & 70ff.
Halkowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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How can we explain the commercial intercession of the Crown? We are evidently dealing with a *tradition séculaire*, for Dom Dinis ran his own merchant navy as early as the fourteenth century. In many cases, the goods that were carried in the Crown's ships, be it soap, coral, the dye woad, sugar or spices, were held at heart as an exclusive right of the Crown, essentially a monopoly, or else as a given duty from a certain contractor. In these instances, the Crown was not trading as an actor on an open market. On other occasions, it seems the Crown was trading just like any other actor. A vessel of the King of Portugal, commanded by Pedro Gonçalves, arrived at Flanders carrying fruits from Valencia in 1465. In instances such as this it is not always clear, however, whether the King was to see a share of the profits of such trade, or whether the ship had merely been hired out or even granted under some form of trade promotion scheme, to private Portuguese merchants. The Santa Maria Flor da Rosa, which appears regularly across the Mediterranean between 1456 and 1463, is addressed in a certain contract of hire as: *Alfonsus Ihanes portugalis et dux et patronus cuiusdam navis ill. m. d. Infantis portugalie presentialiter*. That the vessel was hired out directly to a Genoese merchant only complicates the picture. This needs to be clarified before broaching the larger questions, the roots of such a scheme, which may have some linkage to the historical process of expansion - conquest - colonisation masterminded by an omnipotent monarchy which claimed Portugal in its creation after the long Arab rule.⁶⁴ The motivation, for Jacques Heers, is not one of royal revenue, but political - it was a way the sovereign could extend national influence.⁶⁵

Ciclos de negócio: problems harmonising the spice trade to pre-existing trading movements.

At the same time, there were clearly causes for Crown intervention specific to the circumstances. Despite the letter of privileges granted to the High German delegation under Simon Seiz and Loewenstein in February 1503, German merchants had not readily presented themselves in Lisbon as prospective buyers. As Tomé Pires wrote from Antwerp in February 1504 to reassure the King, the German trading community still had difficulty in taking stock of a brand new Atlantic trading axis debarking in Lisbon (*ajnda agora ho acabaram de*

⁶⁴ see entrance under 'Seguros marítimas' in SERRÃO's, *Dicionário de Historia da Portugal*, (1985); A. RIBEIRO, 'O Rei e a Integridade do património da Coroa', in *Historia de Portugal*, ed. Damião Peres, t. II, 168 ff, Barcelos (Portucalense: 1929).

⁶⁵ Jacques HEERS, 'Portugais et Génois au XV^e siècle; la Rivalité Atlantique-Méditerranée' in *Actas do III Colóquio Internacional de Estudos Luso-Brasileiros*, vol. II, Lisbon (1960).
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creer).⁶⁶

But there were also practical problems jeopardising a free policy of redistribution, particularly as regarded domestic shipping: stockpiles were collecting at the Casa da India largely as a function of the difficulties amassing the sums of capital and volume of freight required to displace this valuable commodity, on top of the risks of a perilous sea passage. In other words, short-term problems in harmonising the spice trade to existent commercial capacities presented themselves.

The historian António Marques de Almeida has enumerated three *ciclos de negócio* or historic cycles of Portuguese trade along the commercial axis between Portugal and northern Europe and which can help to schematise the problem.⁶⁷ The first, which stretched far back into the fourteenth century, concerned itself with traditional goods of the Portuguese earth: dried fruit, especially figs and raisins, honey, wine, olives, skins and cork.⁶⁸ Then, from around 1441, we might denote a second group of goods, re-exports from the beginnings of Portuguese expansion into Africa and colonial exploitation of the mid-Atlantic archipelagos. These goods were initially *oggetti di meraviglia* such as lions, elephant tusks and parakeets, but also ivory and spices like tailed pepper (*pimenta de rabo*) and malagueta, as well as dyes like woad and *urzela* exported from the Azores (and designated ‘das ilhas’ as oppose to the variant ‘do reino’), and small quantities of gold from Mina. It was only in the last third of the fifteenth century that imperial goods, overwhelmingly sugar, started to field a significant economic presence in Portuguese trade. The third cycle is taken to have been inaugurated with Vasco da Gama’s successful return from the Indies and the institution of the Portuguese spice trade.

It is quite evident that a massive quantitative and qualitative leap occurred between the second and third trade cycles on this re-distributive axis. If 56.000 *arrobas*, or 14.000 quintals of sugar was sent annually to northern Europe at the end of the fifteenth century, then the quantities of spices from the Indies sailed north on the third cycle soon rose to an

⁶⁶ A.N.T.T., C.C., pte I, m. 4, d. 63.

⁶⁷ António Auguste Marques de ALMEIDA, *O Eixo Lisboa-Antuérpia. Capitais e capitalistas no comércio da especiaria (1501-49). Aproximação a um estudo de Geofinança*, Fac. de Letras, Universidade de Lisboa (1989), 22-24.

⁶⁸ there is a catalogue entitled ‘li royaume et les terres, desquex les marchandises viennent à Bruges, et la terre de Flandre’; for *Portugal* the entry reads ‘miel, péleterie, cire, cuir, grainme, vint, oile, figues, raisin, valai’. The register was compiled by Legrand d’Aussy and published in *Fabliaux.. du XIIIe et du XIIIe siècle*, 3 edn. Paris (1890), 9.

The first testimony of a Portuguese vessel trading in Flanders goes back to a description of a wreck in the archives of Nieuport that was expected to arrive in Bruges in 1194 and that was carrying wood, olive oil and molasses (*meil-suckre*). VAN DEN BUSSCHE, *Flandre et Portugal* (1874), 48.

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estimated 40.000 quintals per annum (see below). The quantities of African spices imported were trifling in comparison: Godinho has calculated that between 1491-1509 an average of only 370 quintals of West African malagueta per annum was exported to Flanders.

In terms of value, Guicciardini estimated that the value of the spice trade at one million crowns was worth ten times that of sugar.⁶⁹ Another, somewhat more official source, the collections for a new tax levied by Brussels between 1552-1553 to finance the ongoing war with France, suggest that spices figure at a little under four times the value of sugar, but these calculations were made on Iberian shipping generally, inclusive of Canary Island production. In any case, spices were by far and away the principal export commodity of the Iberian peninsula to the Low Countries, constituting half the overall value.⁷⁰

Table 1. Foreign Trade of the Low Countries with the Iberian Peninsula, 1552-1553.

IMPORTS.	VALUE IN <i>LIBRAS GRUESAS</i> [grossi]	
	total	%
Spices	1,190.141	49.67
Primary materials /textiles	338.666	14.13
Sugar	309.762	12.93
Fats and oils	180.518	7.53
Food products	155.197	6.48

3.6. Moves towards the activation of the Crown monopoly over imperial trade.

The hiccups in the free re-distribution of Portuguese spices took place as the background ripples to a wider debate that reassessed the very nature of Portuguese royal intervention in the imperial economy. Monopoly rights had been claimed by the Portuguese Crown from the very beginnings of national expansion, from the discovery of new lands

⁶⁹ GUICCIARDINI, *Descrittione di tutti i Paesi Bassi*, Antwerp (1567).

⁷⁰ Archives generales du Royaume de Belgique, Bruxelles. Chambres de Comptes, nos. 23.469-23.472. The tax returns have been presented in the unpublished thesis of L. BRIL, *De handel tussen de Nederlanden en het iberisch schiereiland Smidden XV eeuw*, Groningen (1962).
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Capsule A. The quantitative dynamic in Portuguese spice imports over the course of the sixteenth century.

It may be worth pausing a moment to clarify the quantities of spices that the Portuguese were importing on to the European market. If we put aside the first five years of the sixteenth century, which witnessed the ups and downs of a trading system in the throes of establishment, then we are, in Castro's estimation, looking at around 60 - 75.000 quintals of incoming spices a year. Pepper would have constituted only 20 - 30.000 quintals.¹ Castro's figures seem to set a lot of store by undeclared and smuggled imports (see § 3.6.), but in any case for spices as a common entity appear way too high. Research by a group of Italian scholars has, by contrast, put the figure somewhat lower, and with greater nuance over time. Thus if between 25 - 30.000 quintals were imported between 1500 - 1510, as Quirini estimated, between 1510 - 1520 the figure rose to 40.000 and sank subsequently to 19.000 between 1520 - 30.² This trend would appear to accommodate the miscellaneous spot statistics that avail themselves, faithfully collected and compiled by Godinho, and come to the closer recognition that pepper constituted at least two-thirds of the total cargo. It constituted, for example, 40,621 quintals of the total cargo of 42,377 quintals exported from Malabar in 1518; 30,000 of 31,255 quintals in 1525; and 15,437 of 18,164 quintals carried in 1530.³ Pepper, by this reckoning, constituted at least 85% of the cargoes Portuguese brought back from Asia in the first half of the sixteenth century. But there can be little doubt that the share of Moluccan fine spices rocketed - by as much as ten times - over the course of the century. The anonymous report of 1568 suggests, for example, that between 700-1000 quintals of cloves were carried back to the Kingdom each year.⁴ We are encouraged to believe that it was ginger, the lowest valued spice in proportion to cargo volume, that was gradually replaced.⁵

Another group of historians working on the phenomenon of Portuguese decline point to the collapse of the Portuguese pepper trade in the last decade of the sixteenth century, after a perking up during the 1570s and '80s. The decline saw an average annual import into Lisbon of around 23.000 quintals in 1588-90 dwindle to about 7.000 in 1592-94.⁶ But a deeper look might well evince scepticism connected with the high jinx played out amongst the private contractors, culminating in the Crown briefly taking the pepper trade back under direct royal administration in 1597. Raffael Fantoni, a Florentine nobleman, observed around the turn of the century that 20 - 25.000 cantars of pepper were still imported into Lisbon beyond 4 - 5.000 cantars of other spices.⁷ It is only in a longer-term perspective, particularly from the onset of the seventeenth century, that we can trace definitive indications of decline and a strong relative shift to alternative commodities, silks and Cambay cloths, which were by this time steadily encroaching on, and substituting, what had had been up till then an almost exclusive trade in spices. For the period 1580-1640, Boyajian has shown how spices constituted as little as 22% of incoming cargoes from the East.⁸

¹ Armando CASTRO, *História Económica de Portugal*, Lisbon (1985), vol. III, 112.

² Ruggero ROMANO, Alberto TENENTI & Ugo TUCCI, 'Venise et la route du Cap, 1499 - 1517', *Méditerranée et Océan Indien. Travaux du Sixième Colloque International d'Histoire Maritime par les soins de Christiane Villain-Gandossi et de Manlio Cortelazzo*, (Venise, 20 - 24 Septembre 1962, S.E.V.P.E.N.), 117. These statistics are shared by S.Y. LABIB, *Handelsgeschichte Ägyptens im Spätmittelalter (1171-1517)*, V.S.W.G., Beihefte, 46, Wiesbaden (1965), 472.

³ A.N.T.T. Nucleo Antigo, no. 705 and Cartas dos Viceréis da Índia, no. 16 and SANUTO, *I Diarii*, tom. 54, col. 131. MATHEW, *Portuguese Trade with India in the Sixteenth Century*, 124, adds two further sets of statistics.

⁴ see J. WICKI, 'Duas relações sobre a situação da Índia portuguesa nos anos 1568 e 1569', in *Studia*, vol. VIII, (1961).

⁵ C. WAKE, 'The Changing Pattern of Europe's Pepper and Spice Imports, c. 1400-1700', *Journal of European Economic History*, vol. 8, Rome (1979), 395.

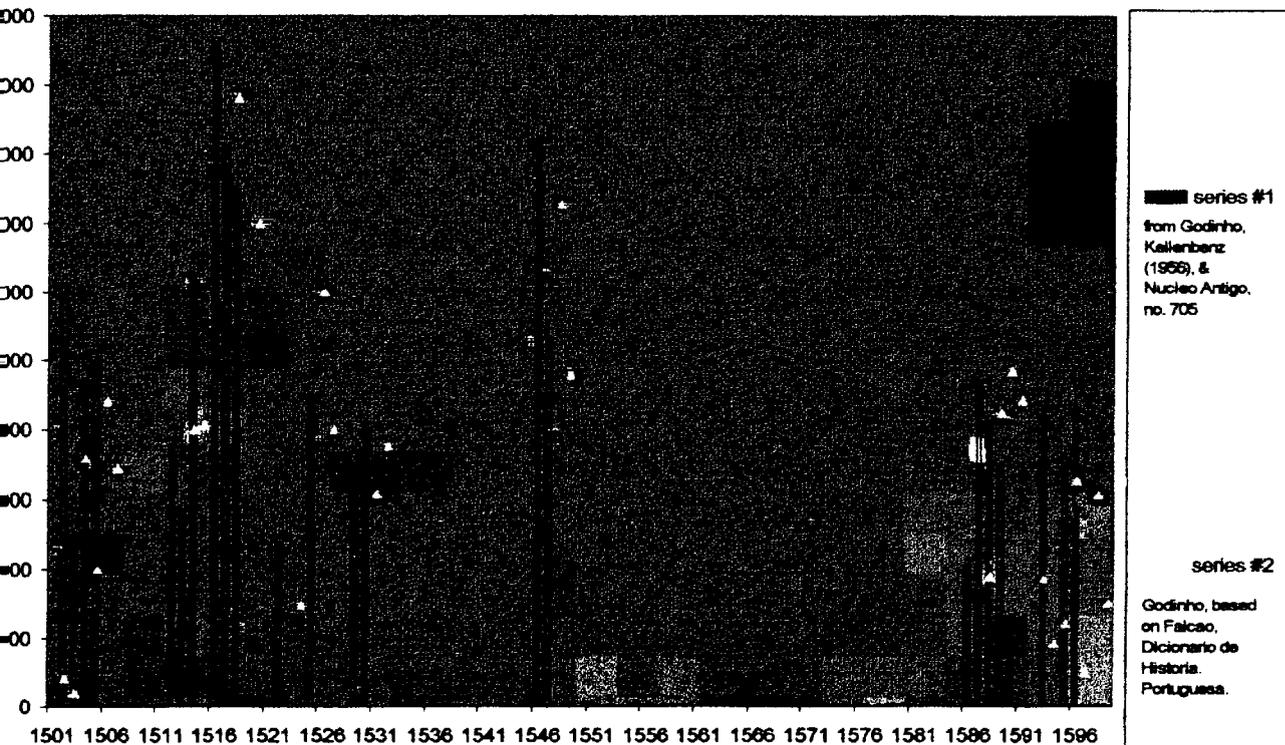
⁶ see table in GODINHO, *L'économie de l'Empire Portugais aux XV^e et XVI^e Siècles* (1969), 705.

⁷ Raffael FANTONI, *Relazione del Regno di Portogallo Fatto da R.F. Fiorentino*, Fondo Confalonieri, 34, fol. 160.

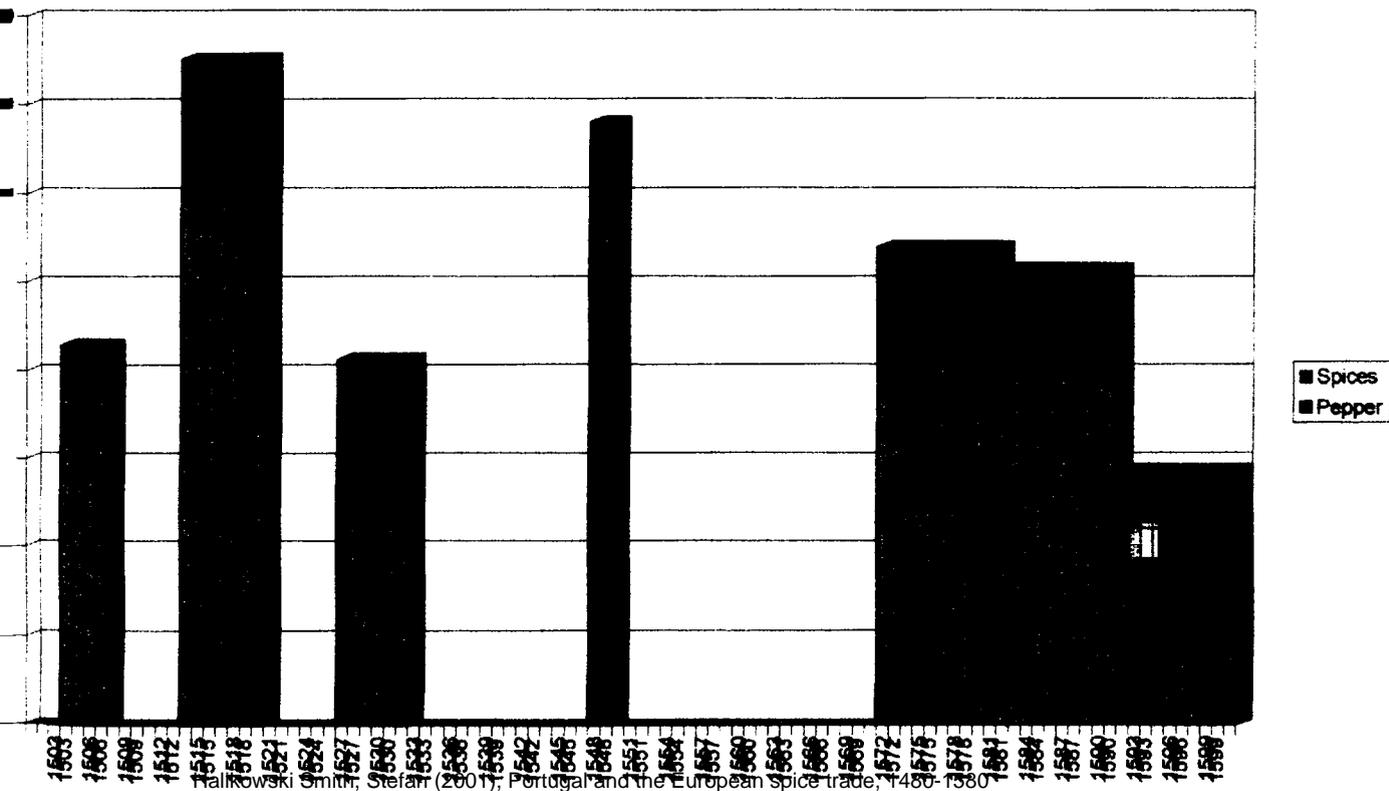
⁸ James C. BOYAJIAN, *Portuguese Trade under the Habsburgs*, Johns Hopkins University (1993), 44.

Figure A. The quantitative dynamic in Portuguese spice imports over the course of the sixteenth century.

The volume of Portuguese pepper imports, 1501-98.



Average annual Portuguese imports of spices, in quintals.





unclaimed by European sovereigns, either uninhabited or in the sway of heathen rule. These claims were grounded upon crusading bulls that the Papacy had issued to D. João I, D. Duarte and D. Afonso V, and which had denied the native Moslem populations the right to trade and reciprocally, any Christian to supply iron, wood or arms, in the fear that these peoples (*nefandissimi Mahometis secta*) pose a naval or military challenge to their Portuguese sovereigns. It was a short leap for the Portuguese Crown to claim that it should therefore be accorded a universal monopoly in heathen lands over trade and communications, and that any profits or advantage accruing would constitute a just reward for its service to God and a reparation for losses and damages that it suffered in the process. The papal bull *Romanus Pontifex* of January 1455 consequently accepted this position, reinforcing it with a punitive code that threatened excommunication for individual transgressors and interdiction in the case of corporate bodies, which could however be lifted on payment of the stipulated fine and licence tax to the Portuguese King.⁷¹

The arrangement was subsequently re-confirmed by Sixtus IV in 1481, if made out *in nomine ipsorum Alfonsi Regis et Infantis*, in recognition of the concession Afonso V had made to his uncle Dom Henrique, styled the Navigator, in 1443 for the rights to trade and navigation to lands beyond Bojador. These rights were hereditary, though it seems that the ruling monarch was instrumental in their delegation to successive infantes and monarchs elect, first Dom Fernando, Afonso's brother, between 1461 and his death in 1470, and then Prince João, Afonso's son, in 1474. Fernando was said to be the richest man in Portugal on his death.⁷² Thereafter, the rights (*resgates*) awarded junior members of the reigning dynasty were slowly reined in as part of the centralising initiatives started by João II (1481-95). The concession to the Duke of Beja in 1589, as future King, was limited to Guinea and the Azores in 1489.⁷³ On his assumption of the throne as Manuel I, the rights were reclaimed by the Crown.

Now, up until the turn of the century, the trading rights on these new lands down the west coast of Africa had largely been tendered out by members of the royal family in temporary contracts for a fixed sum with a share of trading returns in the form of duties. This had been the type of agreement reached with Telles and Ribeiro in December 1473 with

⁷¹ There is a copy of *Romanus Pontifex* in Gaveta 10, maço 5, doc. 27, which is published in *Descobrimentos Portugueses*. ., 507-508 and in *Alguns Documentos do Arquivo Nacional* (1892), 14 ff. if under a false date.

⁷² A.H. de OLIVEIRA MARQUES, *História de Portugal*, Lisbon: Palas, 9th ed., (1982), v. I, 312.

⁷³ A.N. Torre do Tombo, vol. 12, ff. 102-103, 104-105, 106-107, 108-109, 110-111, 112-113, 114-115, 116-117, 118-119, 120-121, 122-123, 124-125, 126-127, 128-129, 130-131, 132-133, 134-135, 136-137, 138-139, 140-141, 142-143, 144-145, 146-147, 148-149, 150-151, 152-153, 154-155, 156-157, 158-159, 160-161, 162-163, 164-165, 166-167, 168-169, 170-171, 172-173, 174-175, 176-177, 178-179, 180-181, 182-183, 184-185, 186-187, 188-189, 190-191, 192-193, 194-195, 196-197, 198-199, 200-201, 202-203, 204-205, 206-207, 208-209, 210-211, 212-213, 214-215, 216-217, 218-219, 220-221, 222-223, 224-225, 226-227, 228-229, 230-231, 232-233, 234-235, 236-237, 238-239, 240-241, 242-243, 244-245, 246-247, 248-249, 250-251, 252-253, 254-255, 256-257, 258-259, 260-261, 262-263, 264-265, 266-267, 268-269, 270-271, 272-273, 274-275, 276-277, 278-279, 280-281, 282-283, 284-285, 286-287, 288-289, 290-291, 292-293, 294-295, 296-297, 298-299, 300-301, 302-303, 304-305, 306-307, 308-309, 310-311, 312-313, 314-315, 316-317, 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respect to the land between S. Pedro de Gallé and Bojador, to run for five years, or with Bartolomeu Marchione between 1490-95 for the *trato dos rios da Guiné*.⁷⁴ Policy here was not going to shift in any large degree even with the Crown's reassumption of the rights to trade. The discovery of the sea route to India, on the other hand, had been a result of dedicated application by the Portuguese Crown over a sixty year period and at great expense, and the prospect of dazzling trading opportunities in the long esteemed products of the east had been one of the dynamos and was not simply going to be passed over by the Crown. Besides, the costs of operating such an enterprise, the risk, the interval before any profits could be reaped, the overheads such as maintenance of fully armed convoys - no private enterprise could be remotely capable of undertaking such a project. The *Carreira da Índias* had been automatically subsumed within the royal monopoly on Portuguese overseas activities in order to ward off any competitors or interlopers that might jeopardise Portugal's fragile position in the East. Licensed private investors, as we have seen, had been allowed, in return for vital injections of cash into the system, either to sail their own shipping under the protection of the Portuguese armada or else had rented out spare cargo space in the available holds. In 1501, the Spanish Crowns had prohibited the passage of foreigners to the Indies, and from 1503 had worked toward the establishment of a centralised Casa de Contración in Seville with full directing powers. Now the Crown thought of actively taking full control of transport and trade between Lisbon and its rapidly developing eastern Empire.

Unfortunately, the history of the implementation of this project is nothing if not vacillatory. Godinho suggests that the idea first came about in the wake of the return of da Gama's second fleet in September 1503, a large fleet with a large cargo, which had the unwelcome effect of immediately depressing prices somewhat on the Lisbon and Antwerp markets.⁷⁵ The contemporary commentator Ca' Masser suggests, consequently, that the rules governing private participation changed as from 1503, affording the Crown a greater measure control over the volumes of spices being brought back to Europe. Frustratingly, no direct information is given, although we are encouraged to believe that pressure was put on private traders to pay a freight charge and load up what space the King was prepared to lease on state vessels, rather than lead their own ships out East, where they could be filled with whatever

⁷⁴ the former of the two contracts is in the Chancelleria de Dom Affonso V, liv. XXXIII, fol. 46v and summarised by H. da GAMA BARROS, *História da Administração Pública em Portugal*. ., (1945-54), vol. X, 164.

they liked.⁷⁶ Experience, moreover, demonstrated that the profit motive of private merchants frequently interfered with the official and largely military charges of the state fleets.

Other sources would suggest that the kind of monopoly that the King envisaged was more rigorous still; a delegation of South German merchants who came to Lisbon at the beginning of 1504 in the hope of securing the right to invest in the Lopo Soares fleet and send two accompanying agents was refused out of hand. They were told that the King was intending in the near future to reserve Indies trade exclusively to himself. And yet this did not prevent outside investments by Bartolomeu Marchionni, the Affaitadi, Rui Mendes and the participation of a private *nau* of one Catarina Dias in that same fleet of Lopo Soares that set sail in April.⁷⁷

The January 1, 1505 decree.

The January decree was a significant step towards formally de-limiting the parameters of a Crown trading monopoly in oriental spices and formulating the kind of business relationship that the Crown wanted to forge with private enterprise over the management of the spice trade. It established, for the first time, rules regarding the buying and selling of these goods, which were to be managed from two, and later widened to three nodes of Crown intervention - Lisbon, the Indian factories and Antwerp.

Substantively, the decree consisted of the declaration that private merchants, whatever their nationality, were no longer empowered to freely dispose of spices brought back on their own ships in the Indies fleets; henceforth they were forced to sell to the comptroller (*vedor*) of the Casa da India at a fixed price established beforehand. Customs were tightened up to deal with this important formality. Even before the ships entered port, armed customs police were dispatched to carry out a thorough body search on everybody on the ship, including the captain, and every item of personal baggage was examined before being stamped an approval and permission given to unload at the Casa da India.⁷⁸ The same spices could then be re-

⁷⁶ Ca' MASSER, *Relazione di Leonardo da C.M. alla Serenissima Repubblica di Venezia sopra il commercio dei Portoghesi nell'India dopo la scoperta del Capo di Buona Speranza (1497-1506)*, published in *Archivio Storico Italiano*, Firenze, (1845), Appendix, t. II, 23 suggests that the duties of *quarto* and *vintena* continued to be levied on incoming cargoes, regardless of whether it was the King's ship.

⁷⁷ registered in a letter of J.F. Affaitati dated April 7, 1504, see Marino SANUTO, *I Diarii*, Venezia (1880-1903), VI, 26.

⁷⁸ The Casa had, in effect, replaced the traditional Alfândega or customs further along the Tagus estuary. CA' MASSER, 'Come si portino le spezierie in questa terra', pp. 28-29 of his *Relazione*. ., pub. (1845). In times of plague, the King's palace at Saneruz was sometimes used for unloading. Halkowski Smith, Stefan (2001) Portugal and the European spice trade, 1480-1580 European University Institute

bought from the Casa at another fixed price named by the Portuguese Crown, the receipts of which, known as *cartas de quitação* and recorded by the *tesoureiro da especiaria*, have largely survived and constitute a valuable source material for historians. Apart from a small and specified sum of spice reserved for the national market - reiterated in the privilege offered the Germans in 1509 in which they were obliged to market the products of the Indies outside Portugal - the buyers were given the green light from the Crown to sell as they wished, with no prescription on sales at Antwerp: 'the said spices can be. . . sailed and carried out whether overland or by sea' (*le dette spezierie possino.. navigare e trare fuore sì per terra come per mare*). The difference between the sales and purchase price at the Casa da India was justified as a contribution towards protection costs, the equipping and escort of an armed fleet on the perilous six-month voyage, but also as a means of ensuring a minimum price of sale and, thereby, a measure of control over the vagaries of a volatile market. Thereafter the re-exporters would be completely free to sell and market how and where they wished. Duties on spices leaving Lisbon were dropped altogether, unless transported by the owner himself, in which case the duty to the King would be 5%.

The decree needs to be understood as a means of instilling order and price control over a market otherwise dominated by endemic instability and runaway speculation. According to the Venetian ambassador secret, in the King's estimation uncertainty 'was the reason for holding spices in little regard' (*era causa di tener le spezie in poca riputazione*), against which the decree was promulgated so that 'merchants should not fear buying spices on account of the prices not being stable' (*i mercadanti non temessero di comprar spezie con dir che i prezzi non stariano fermi*).⁷⁹

In all truth, the problem was somewhat more serious. Spice prices had collapsed on the Lisbon and Antwerp markets as successive fleets carted back more spices from India than there was immediate demand; the value of pepper had consequently plunged from 40 to 20 ducats a quintal over the first five years of the sixteenth century (see Graph 3). We have already seen how the Crown was forced to intervene in the re-export of these same spices, often sending consignments on to third destinations, such as Falmouth, where there was considered to be better business (*despacho*), as private commerce, geared to a much smaller scale of trade, adjusted to handling such huge sums of commercial capital. Now the problem was one of stimulating the European market. There is no doubt that it took some time for Portuguese spices to win their acceptance in the European marketplace. To those familiar with marketing theory, this is a familiar phenomenon built in to the 'life curve' of a product. Thus

initial reactions from German consumers, Guicciardini tells us, was scepticism and distrust: 'as there was nobody who knew anything of the new voyage of the Portuguese to the Indies, they were so astonished that they were in doubt as to the abundance of the said spices, suspecting that they were false or tampered with. .'.⁸⁰ It seems a similar suspicion had hampered the first Portuguese attempts to market both *malagueta* and *pimenta de rabo* in Flanders towards the end of the fifteenth century, while the products of the New World met with difficulties for coming from 'so strange a place'.⁸¹ In this context, we must see the decree as a desperate attempt on the part of the Crown to boost the value of sale by according itself the powers to withhold until prices recovered and by selling on at a desired for minimum price.⁸²

The following table lists the fixed prices of sale at the Casa da India for a variety of oriental spices, as reported by Ambassador Quirini in ducats per cantar⁸³:

Table 2. Fixed prices of sale at the Casa da Índia in 1506.

Commodity	Fixed price in India	Fixed sales price at Lisbon
	in ducats per cwt/cantar.	
Pepper	3.00	22
Ginger	0.75	19 (-20)

⁸⁰ 'comme il n'eut aucun qui sceut rien du nouveau voyage des Portugais aux Indes, en furent si estonnés qu'ils estoient en doute de la bonté desdites especes, et soupçonnoyent que fussent faulces et sophistiquées..', GUICCIARDINI, *Description de tout le Pais-Bas autrement dict la Germanie inferieure, ou Basse-Allemaigne*, ed. Plantin, (1582), 130.

⁸¹ for *malagueta*, see 'Portugal nás Cronicas de Nuremberg de Hartmann Schedel' ed. J. Mendes de Almeida, in *Arquivo de Bibliografia Portuguesa*, no. 19-20, Coimbra (1959), 214. For *pimenta de rabo*, de BARROS, *Asia*, i. 80 (Venice, 1561). Another account, by contrast, seems to suggest that the African cubeb was received with great enthusiasm on the Antwerp market, but it could perhaps play on its novelty value where pepper and *malagueta* had long been delivered by other suppliers ('cijas mostras foram logo enviadas a Frandes e a outras partes, e foy logo avida em grande preço, e estima'), Ruy de PINA, 'Chronica del Rey D. João II', *Livros ineditos da história portuguesa*, Lisbon (1790-1824), vol. 3, 74.

For the reception of *lignum Guaiacum* from the New World, see Ulrich von HUTTEN's *De Guaiaci medicina et morbo Gallico liber unus*, Mainz (1519), trans. by Thomas PAYNELL as *Of the wood called Guaiacum that healeth the French Pockes and also helpeth the goutte in the feet, the stoone, the palsey, lepre, dropsy, fallynge euyll, and other dyseases*, London (1536), fol. 24.

⁸² the decree is reported by QUIRINI, in *Le Relazioni*, ., 13 and CA' MASSER, 'Ordenazion del Re di Portogallo', in his *Relazione*, . published (1845), pp. 29-30.

⁸³ QUIRINI, in *Relazioni degli ambasciatori veneti*, . 13. Note that MATHEW, *Portuguese Trade with India*, 194, uses different measurements (cruzados/quintal as 52.459 kg). I have taken the fixed prices in India from Halikowski-Smith, Stefan (2001), *Portugal and the European spice trade, 1480-1580*, Gino LUZZATTO, *Storia economica dell'età moderna e contemporanea*, Padova (1955), vol. I, 166.

Cinnamon	3.50	25
Cloves	7.50	60 - 65
Nutmeg	4.00	300
Camphor	2.75	100
Mace		100
Sealing Wax (<i>lacca</i>)		45
Incense		16-18
Long Pepper		75

The precise workings of the system are not, however, fully clear to me. Was the above a complete list of goods over which the King effected a royal monopoly of sales? The *Relazione* of Ca'Masser seems to suggest, by way of discrepancy, that only pepper was ever seized from returning ships so as to be turned over to the Casa da India, and then such a procedure pre-dated the 1505 regulations.⁸⁴ Gino Luzzatto suggests meanwhile that 'the Crown ended up reserving itself the monopoly first of pepper and then of all spices' (*la corona finì per riservarsi il monopolio dapprima del pepe, e poi di tutte le spezie*).⁸⁵ This would seem to bear out the discrepancy between Quirini and Ca' Masser, though the re-export contract signed with Bartholomeu Marchioni three months after the decree stipulated re-sale prices only for pepper, clove and cinnamon.⁸⁶

But thereafter, pepper is the only spice that is systematically referred to in the context of monarchically established sales prices and barred from all private commercial interest in the Indies. This is the case with the text of the 1509 privilege granted to Germans domiciled in Lisbon, the Baers report of 1534 and a *relazione* communicated to the Grand Duke of

⁸⁴ CA' MASSER suggests that only pepper was forcibly unloaded from incoming ships from India - 'In detta doana sono magazenì 20, dove sta el piper tutto ordenatamente. Delle altre sorte de spezierie se parteno [portono] cadauna nave le sue..' - and that this was standard procedure even before the 1505 decree. *Relazione.* ., 28/29.

⁸⁵ LUZZATTO, 'Spezie', in *Enciclopedia Italiana di Scienze, Lettere ed Arte*, Roma (1936), vol. XXXII, 368.

⁸⁶ *Chancelaria de D. Manuel*, Livro 46, fl. 130v-131r. The contract is discussed by K.S. MATHEW, *Portuguese Trade with India in the Sixteenth Century*, 195. Haliukowski-Smith, Stefan (2001) Portugal and the European spice trade, 1480-1580 European University Institute

Tuscany by his agent, Filippo Sassetti.⁸⁷ I only wonder whether loose talk of *les poivres*, as in the case of the Baers report, may not have been a colloquial shorthand for meaning spices generally. It has been pointed out, for example, that *poëvre*, or *pyment* in the *Chanson de Roland* is intended to mean all spices; this is part of a tradition that goes back to the *Brevis pimentorum* of Vinidarius from the fifth century A.D.⁸⁸

Efforts to monopolise the buyers markets in Asia.

The decree of January 1, 1505 limited itself to the formulation of a sales monopoly in certain oriental spices, but corresponded to attempts which were being made simultaneously to tighten up control over the market for spices at the other end of the trade chain. The set of political instructions, or *regimento* given to Dom Francisco de Almeida, as he was sent to Goa as Viceroy in 1505, underlined the absolute authority of the royally appointed *feitores* in the new purchasing regime accorded the spice trade - 'Ordenamos que toda a especiaria que se ouver de compra na India se compre por nossos feytores e officiaes que la estom' (We order that all the spices that there are to buy in India be purchased by our doctors and officials there).⁸⁹ Even the Pope was enlisted to remind clerics in the East to refrain from private trade.⁹⁰

The structure of an active trading monopoly had been laid in place that was flexible enough to accomodate a business partnership with private investors. In the years that followed, the Portuguese sought to extend their control of the Asian market for spices. We have already sketched how, following the conquest of Malacca, expeditions first located the specific sources of production in Ceylon and the Banda and Moluccan archipelagoes and then set about the construction of trading posts from which permanent and peaceable trading relations might be conducted. At the same time, direct political control over productive regions inland of the Malabar emporia was envisaged and pursued actively by war during the governor-generalship of Afonso de Albuquerque (1509-15), but was soon commuted to a more

⁸⁷ 'Frammenti di relazione al Granduca I di Toscana, intorno alla navigazione nelle Indie Orientali', taken from the *Indice della Segreteria vecchia*, t. XI and reproduced in Angelo de GUBERNATIS, *Storia dei viaggiatori italiani*. ., 368-.

⁸⁸ VINIDARIUS' 'Brevis pimentorum' is usually to be found alongside Apicius' *De re coquinaria*, as in *Concordantia Apiciana*, ed. Angel URBÁN, Hildesheim: Olms-Weidmann, (1995).

⁸⁹ *Cartas de Affonso de Albuquerque*, ed. A. de Bulhão Pato, 7 vols., Lisbon (1884-98), vol. 2. 272ff.

⁹⁰ the bull 'Preclara devotionis', 27 April 1521. A.N.T.T., m. 22 de Bullas no. 18; published in *Bullarium Patronatus Portugaliae Regum in Ecclesiis Africae, Asiae atque Oceaniae*, Lisbon (1868), tom. I, p. 122-3.
Halikowski Smith, Stefan (2001). Portugal and the European spice trade, 1480-1580. European University Institute. DOI: 10.2870/92585

realistic policy that sought rather to create client states through generous tribute payments to local rulers. In other words, while the Portuguese abandoned the idea of displacing traditional intermediaries who brought the spices down by riverboat to the coast at Calicut, the richest of the Malabar emporia and described in Chinese sources as 'principal port of the Western Ocean', they did successfully manage to create their own parallel supply outlets at Cochin. Annuities (*tenças*) were given to petty rulers of outlying productive areas such as Vadakkenkur, known as the Reyno da Pimenta, and who pledged to cooperate with the Portuguese scheme. In Ternate, the Portuguese agreed to a higher cost of purchase than visiting Asian merchants were accustomed to pay in return for priority rights of lading over available cloves. At Cochin, the Portuguese were able to play on local antipathy towards the Samorin of Calicut by persuading the local raja to formalise a monopoly on purchases in return for military support.⁹¹

Beyond proffering financial lures and pursuing this delicate political game of backing cooperative potentates, the Portuguese strived to enforce their monopolistic scheme by blocking off the Arab ocean-borne traffic that traditionally frequented the coast and constituted the Malabar and Kanara spice trade's primary buyers. The *regimento* that accompanied Dom Francisco de Almeida on his outward journey reminded him:

that nothing could be more important for our service [of the King] than to have a fortress at the mouth of the Red Sea or near it.. for if that is sealed then no more spices can pass through to the lands of the Sultan, and everyone in India would lose the illusion of being able to trade anymore except with us.⁹²

Here we have the inception of the so-called *tampão* policy by which the Persian Gulf was closed off by the Portuguese fortress at Hormuz and the Red Sea by the fortress at Socotra, near the straits of Bab-el-Mandeb. Like much else, this policy remained largely inachieved. A large part of the Arab traffic was diverted to overland caravans. Then there is evidence that the Portuguese preventative patrols were not particularly effective, that the ruler of Hormuz and the Shah of Iran, whose cooperation was needed against the Turk, were allowed to trade freely, even that certain Portuguese in positions of authority connived by selling spices on so as to increase personal revenue, if in small enough quantities to quell

⁹¹ Jan KIENIEWICZ, 'The Portuguese Factory and Trade in Pepper in Malabar during the 16th Century', in *Indian Economic and Social History Review* (1969), part 1, pp. 61-84. The *tença* to the ruler of Vadakkenkur is recorded in Simão BOTELHO, *Tombo do Estado da India*, in *Subsidios para a História da India Portuguesa*, Lisbon (1868), 25. Tomé PIRES, *Suma Oriental*, 83 describes how pepper was transported from the interior to the port of Cochin.

fears that they might compete on the European market.⁹³ That spices were reaching Mecca was admitted by Portuguese contemporary historians from around 1513; in 1566, the governor of India, Dom Antão de Noronha, informed the Crown that 20-25.000 quintals of spice were being illegally transported each year via the Red Sea.⁹⁴

More significant, perhaps, was the Portuguese failure to dominate any of the areas of the world in which spices were grown systematically to the point that they could direct their economic destinies. Only in Ceylon, in the brief period between the 1590s and the 1640s, did the Portuguese come close to controlling the production and world flows of cinnamon, if still compromised by the delegation of trade to private contracts and run-offs with competitors in league with smugglers.⁹⁵ In any case, other species of cinnamon grew under conditions of minimal surveillance elsewhere in Asia, such as the *Cinnamomum burmanii* of Burma, and other varieties notably *Cinnamomum iners* and *Cinnamomum cassia* were found on the Malabar coast, Java, Mindanao, Tongking and southern China. Indeed, all attempts at market control deliberately provoked extended cultivation in areas outside the Portuguese sphere of influence. Clove production spread to other islands, notably Ceram, Amboina and what is now Halmahera.

But in Malabar, as we have seen, and the Moluccas, the Portuguese never made a concerted attempt to master spice production, which meant that they could never fully steer global trade flows and hence ensure their own trading monopoly. As a consequence, as much Malabari spice as came to the Portuguese at Cochin was carried overland through the Ghats in the direction of Madura and Coimbatore, from where it made its traditional way in coastal shipping to the Arabian ports and thence by camel caravan across the Levant to the Venetians. Other spices came into Arab hands at the entrepot of Battecala in the Kingdom of Narsinga.⁹⁶ Arab shipping likewise was never adequately and, in all reasonableness, could not be prevented from frequenting parallel markets for Sumatran pepper, Indonesian drugs and fine spices at Atcheh, a small principality on the northern tip of Sumatra which successfully held out against the Portuguese and which rapidly developed its emporial functions from the 1540s. Armed Atchinese galleys made a huge journey through more southerly latitudes than

⁹³ see Barbosa's letter to the King, 12 January 1513, in *The Book of Duarte Barbosa*, ed. M.L. Dames, Hakluyt Society, London (1918), bk. I, p. XL.

⁹⁴ BAIÃO, A. ed. et. al, *História da Expansão Portuguesa no Mundo*, Lisbon (1937-40), 903.

⁹⁵ C.R. de SILVA, 'The Portuguese Impact on the Production and Trade in Sri Lankan Cinnamon in Asia in the Sixteenth and Seventeenth Centuries', *Indica* (1989), 26 (1-2), 26.

⁹⁶ Halikowski Smith, Stefan (2001). Portugal and the European spice trade, 1480-1580
 QUIRINI, in *Le relazioni degli ambasciatori veneti. .*, 9.
 European University Institute

were patrolled by the Portuguese, passing through the Sunda straits and on via the Maldives to the port of Aden, the emporium on the straits of Mecca that stubbornly refused to fall to the Portuguese. A Venetian source confirms that Atchinese spices continued to circumvent the Portuguese in 1565/66, and bills of lading from July to September 1573 reveal that the French were carrying pepper 'of Assy'. It was to Atcheh (Achen) that the initial voyages of both the VOC and EIC were made at the end of the sixteenth century to secure cargoes of pepper and, lesserly, cloves.⁹⁷

Indeed, statistics reveal that the volumes of spice circumventing the Portuguese monopoly only grew as global production of the six principal spices at least doubled between the first quarter of the sixteenth and the first quarter of the seventeenth centuries.⁹⁸ If the Portuguese initially succeeded in carrying off as much as 30% of Malabar pepper, by the end of the sixteenth century the amount of pepper in Portuguese hands was as little as 3-4%.⁹⁹ The proportion of the 2.500 tonnes of pepper estimated to grow in northern Sumatra and the Malayan peninsula around 1510, destined principally for the Chinese market, was almost certainly lower still.¹⁰⁰ Estimates for the other spices are a little more positive: it seems that the Portuguese were responsible for around 8% of the world's cloves and as much as a third of Asian cinnamon.¹⁰¹

Europe, then, never accounted for much more than a quarter of the spice trade globally. China, of course, was the principal market; though if Marco Polo held that for every ship laden with Malabar pepper heading west at least one hundred junks set off for China, current estimates put her consumption at three-quarters of southeast Asian production.¹⁰² The rest was either consumed on the Indian sub-continent or else made its way by the overland routes to the Levant and from thence, a certain proportion, principally in Venetian

⁹⁷ COUTO, *Da Asia*, VIII, 60/9; BARROS, *Asia*, II, 423 ff; BARBOSA, vol. II, 227; LANE, 'The Mediterranean spice trade', 586 and BRAUDEL, *The Mediterranean*, I, 555; BOXER, 'A Note on Portuguese Reactions to the Revival of the Red Sea Spice Trade and the Rise of Atjeh, 1540-1600', *Journal of South-East Asian History*, X, (1969), 418-19.

⁹⁸ GODINHO, I, 525; Armando CASTRO believes that Indian pepper production rose about 4.5 times, in Sunda as much as seven times, over the course of the sixteenth century; or overall, from between 5.820/6.456 to about 29.000 or even 35.000 metric tonnes.

⁹⁹ Jan KIENIEWICZ, 'Pepper Gardens and Market in Precolonial Malabar', in *Moyen Orient et Océan Indien XVIe - XIXe siècles*, no. 3 (1986), Paris.

¹⁰⁰ *The Suma Oriental of Tomé Pires*, Hakluyt Society (1944), 82, 140, 144.

¹⁰¹ CASTRO, 111, and Luiz Filipe FERREIRA THOMAZ, *De Malacca a Pegu. Viagens de Um Feitor Português (1512-15)*, Lisbon (1966), pp. 14-15, footnote #1.

bottoms, to Europe.

Further attempts on the part of the Portuguese Crown to restrict the trading monopoly to itself.

In reality, the Portuguese Crown could never dispense with the outside investment that financed the running of this same *Carreira das Indias*. But it tried for a period, through a tightening up of the royal enterprise, to commute what had been until then an active foreign presence into a more passive one. We have seen how the German delegation petitioning the King at the beginning of 1504 for rights to the Indies trade was rebuffed, but that a system of licenses for individual voyages finally prevailed. Formally, there were no forthright bans on foreign commercial involvement in the Indies as were promulgated in Spain at this time with respect to non-Castilian citizens, though the Portuguese Crown reserved itself the right to intervene on behalf of its subjects as it had in the mid-Atlantic island sugar trade, that is, in favour of exclusive domestic merchant shipping.¹⁰³ But, as I shall hope to demonstrate, whatever the favourable legislation passed, the real intentions of the Crown were nevertheless that these High Germans limit themselves to depositing currency or specie at the Portuguese mint for which they would be given a remittance tradeable against the colonial products the subsequent Crown fleet brought back to Lisbon. In other words, what the monarchy really wanted was to restrict the active foreign participation in the spice trade, with all the challenges to Crown control that this presented, to European re-export alone, without losing those vital injections of foreign specie that sustained the Portuguese trading system as a whole.¹⁰⁴

The discussion over the nature of private participation came to a head in the wake of the 1505 decree. The fixed prices for re-sale announced by the *Casa da India* had proved too inflated for the market demand of the time, but the Crown was not prepared to concede a cut in its asking price and the release of cheap spices on to a depressed market. This seems to have characterised the Portuguese Crown position with regard to its much sought after

¹⁰³ The Spanish decree of 13 November, 1522 is dealt with by Richard KNOETZKE, 'Legislación sobre inmigración de extranjeros in America durante la época colonial', *Revista internacional de sociología*, 3, (1945), 269-99; idem. 'La legislación sobre inmigración de extranjeros in America durante el reinado de Carlos V', in *Charles-Quint et son temps*, Paris (1959), 92-111. The prohibition against foreigners was ultimately suspended in four stages between February 1524 and September 1528.

monopoly; it was more interested in the price distortion such a position could yield than as a weapon to push Venetian trade categorically out of contention through sustained cut-throat competition. The upshot of such short-termism plagued the Portuguese Crown in 1505 as much as it did for the rest of the century: few ready sub-contractors, aware of the volatility of the market, prepared to risk their livelihoods for prospects of little return, and accumulated stocks at the Casa da India warehouses. Quirini estimated, with all the detail of a close observer, that by May 1506 only 14-15.000 cantars of spice had been cleared from stocks of around 54.000 introduced to the Casa da India since the decree's promulgation.¹⁰⁵

With the return of the Almeida fleet in November, 1506 and an abundant cargo of spice largely in the hands of High German and Italian private investors, it appears that the Crown decided that no more spices were to be released at all for the time being. With their cargoes confiscated, a bitter dispute erupted, fuelled by the humiliating body search conducted on all the ships crew, even officers, for 'contraband' goods and booty, particularly jewels, which the private parties felt they had rightfully earned as a reward for service in the capture of the towns of Quilon and Mombasa. At issue was the legality of the 1505 decree, specifically the obligatory re-sale of spices brought back from the Indies by private parties to the Crown at a pre-determined price, given its retroactive application to a private fleet whose terms of sailing had been negotiated and agreed upon with Lucas Rem on August 1, 1504. In fact, the Crown's actions went somewhat beyond the 1505 decree in that it was not prepared to hand back the spices brought in the German boats even after the 'tax' had been paid. The German consortium's purchases were set aside in Crown warehouses, non-taxable possessions were returned, but the spices, which constituted by far the greater part of the cargo, were to be considered non-redeemable.¹⁰⁶

It is easy to interpret this incident as contextual evidence for the prevailing historical fallacy that it was the Feitoria that was consequently made responsible for the sale of Portuguese spices. Given the climate in which the Crown was actively appropriating an ever greater degree of control over imperial trade, this would be all the more a ready conclusion. Contemporary reports would only appear to fuel the misunderstanding. Perhaps the most widely available source of all on trade in Antwerp during this period, Lodovico Guicciardini's *Descrittione di tutti i Paesi Bassi*, published in Antwerp in 1567 and immediately translated into French, and later English (1593) suggested that:

¹⁰⁵ QUIRINI, in *Le relazioni degli ambasciatori veneti. .*, 13.

¹⁰⁶ REINHARDT, in *Die Geschichte der Europäischen Expansion. Die alte Welt bis 1818*, (Stuttgart, 1983), vol. I., 96; F. HÜMMERICH, *Die erste deutsche Handelsfahrt nach Indien*, Munich 1922, pp. 135-139. Halikowski Smith, Stefan (2001). Portugal and the European spice trade, 1480-1580. *HÄBLER speaks of the indemnity in Die überseeischen Unternehmung...*, 30. European University Institute

But the King of Portugale, hauing partly by loue, partly by force, drawne all the traffique of spices in *Calicut* and the Iles adiacent thervnto into his owne hands, and hauing brought them to Lisbonne, sent his factor with spice to *Andwerp*, by which meanes it drewe all Nations thyther to buy spices of the said Factor.¹⁰⁷

We now know, from the time documentary research was begun on chancellery records, that alongside the active engagement of the Crown Feitoria as sales agency, the Crown entered into short term re-export contracts with private parties from as early as April 1505, that is, even before the return of the Almeida fleet.¹⁰⁸ Indeed, it may be that the Crown's sequestration of the German cargoes was prompted by the promise of exclusive rights to Marchionni. Certainly, the King was anxious to limit the quantities of spice that poured on to the market - for prices remained depressed in Antwerp - and the number of actors involved therewith. But there is no evidence that the Portuguese Crown ever sought to mastermind the complete monopolisation of the marketing of spices under the King's hand. It was not attempted with any other products, although there was such ready access for private navigation to the mid-Atlantic islands that there was never any point in the Crown's trying tightly to restrict the market of sugar to itself.

The point rather was to avoid situations exemplified by the Almeida fleet in which private parties effectively had the full run of trade from producer to consumer, with an interruption, effectively little more than a duty payment to the Portuguese Crown, at Lisbon. Too much control over the trade was resigned according to such a scheme.

The solution the Crown came up with can be found in the privilege of 1509 granted to Germans domiciled at Lisbon, and which reads as follows:

Item We desire and wish it that they should hold all the privileges, freedoms and exemptions that are granted by us to our own subjects, with the sole exception of the rights to our isles, which they shall not wield. .¹⁰⁹

Jean Denucé, to whom we owe the publication of this document, has unfortunately misguided

¹⁰⁷ GUICCIARDINI, *Description...*, (1593) re.ed., 27.

¹⁰⁸ A.N.T.T., Chancelaria de D. Manuel, livro 46, fl. 130v-131r.

¹⁰⁹ 'Item Queremos e nos praz que tenham, e ajã todos priuilegios, liberdades e franquezas, e ysenções que per nos são dadas, e outorgados aos nossos naturaees tirando sómente os direitos das nossas Ilhas de que nã Vsarã nem isso mesmo se entendera que ajã de tratar na Jndia em caso que alguu-a ordenaça façarnos ao diante por que mandemos que nã ajã de tratar nella senã os naturaes do Regno.', *Chancelaria de D. Manuel*, liv. 36, fl. 41; c.f. J.P. CASSEL, *Privilegia und Handelsfreiheiten, welche die Könige von Portugal ehedem den deutschen Kaufleuten zu Lissabon ertheilt haben*, 1st part - Bremen (1771), no. IV. Published in DENUCÉ, 384-386.

generations of researchers with a faulty translation of the succeeding key clause regarding rights on the Indies trade and whose lack of punctuation can create understandable ambiguities. Thus ‘nem isso mesmo se entendera que ajã de tratar na jndia em caso que alguu~a ordenaça façamos ao diante por que mandemos que nã ajã de tratar nella senã os naturaes do Regno’ becomes ‘à moins que nous promulguions un ordre contraire en faveur exclusive des nationaux de ce royaume, ils pourront faire le commerce dans l’Inde’.¹¹⁰ Rather, what is meant is: ‘Neither is it to be understood that they may trade in India in case we are to decree in the future that none but subjects of the Kingdom may trade there’.

The Crown, as it had once before told the German trading community, wanted to keep trade in the imperial sphere, not so much for itself, but at least out of the hands of German capitalists, at least actively. For, just as in 1504, new trading fleets to the Indies did not cease to include Italians, Francisco Corbinelli in the armada under Dom Fernando Coutinho in 1509, and Empoli and Dinis Cerniché (Sernigi) in the succeeding fleet under Diogo Mendes de Vasconcelos.¹¹¹ And this goes to confirm a central contention of Chapter 7, that despite official privileges with which Germans would appear to come away legally to all intensive purposes as *naturaes*, the Portuguese Crown’s *de facto* treatment of these two trading communities interested in concessions on the spice trade was strikingly different.

At any rate, the events of 1506 and 1509 served to reinforce the Portuguese Crown trading monopoly over the trade in spices. Foreign merchants no longer had such free rein on the Carreira das Indias and, by and large, the testimony over the second decade of the sixteenth century confirms a much smaller presence, as Albuquerque wished. Second, the institution of an official sub-contractor on the European re-export leg, in combination with a royally appointed factor in Antwerp with whom he could collude, helped to maintain high prices on the European market. The deployment of naval forces in the Indian Ocean would prevent the usurpation of the monopoly by rivalrous occidental powers, while the *tampão* policy was to keep outlets other than the Cape route sealed up.

But then why the stream of concessions, in the shape of *quintaladas*, *forros*, *câmaras*, *gasalhados* and *liberdades* to private parties and officials in the Estado da India? It seems that these were concessions in the true sense of the word and, apart from pepper, not subject to the rigmarole of obligatory surrender to the Casa da India, nor even payment of the 30% duty

¹¹⁰ DENUÇÉ, ‘Privilèges commerciaux accordés par les Rois de Portugal aux Flamands et aux Allemands’, 385.

¹¹¹ António Marques de ALMEIDA, *O Eixo Lisboa-Antuérpia, Capitais e capitalistas no comércio da Índia* (Lisboa, 2001), Portugal and the European spice trade, 1480-1580

as if it constituted private trade. The concessionary chests (*caixas*) were not, for example, included in the standard estimations of the ship's lading, the *carga grossa*.¹¹² Gaspar Correia suggests only the 10% duty 'to God' was levied.¹¹³ It seems the Portuguese monarchy was constrained by lack of funds to grant these privileges, for the quantities signed away in this manner were too large to be disregarded from the functioning of an otherwise active royal monopoly. According to Godinho, the sum of both official and illicit *liberdades* would have amounted to a quarter, sometimes as much as a half of the total cargo carried, and Simão Botelho, writing in 1552, reports that of two ships arriving from Malacca that year 'one brought 10 *bares* of cloves for him, and the other none, for it was wholly occupied by *bares* of *forros*'.¹¹⁴

Exemptions only seem to have multiplied with the passage of time. While the captain of the cinnamon fleet to Ceylon was originally remunerated with the permit to transport and sell 150 bahars of cinnamon on his own account, this was supplemented from about 1542 with a fixed flat salary of 1000 pardaos. To his export rights were added those of the King of Kotte and the Captain-General of Ceylon, 100 bahars each by the 1590s, the Camara de Colombo, a further 40 bahars, Vasco da Gama's heirs, 60 bahars and, by royal orders of March 1588 and April 1595, Dona Catherina, 200 quintals per annum.¹¹⁵

To be fair, a true and sustainable monopoly was never very much on the cards, even if history (and the formal logic of economics) teaches that they never are. We have looked at some of the more obvious lacunae in the Portuguese trading monopoly, from both within, such as a compromising forced cooperation with independent merchant bankers and the *liberdades*, and without, the failure to exclude traditional purveyors and dominate the trade totally. Niels Steensgaard, in his much acclaimed thesis *Carracks, Caravans and Companies*, has argued that the foundations of the Portuguese monopoly, based as they were on force, or threat of force, rather than competitiveness, ensured that the system was unsustainable in the long run, and was thus bound to failure or, as can otherwise be understood, crumble in the face of an easy take-over bid by the Dutch at the beginning of the seventeenth century. That

¹¹² see, for example, the *Regimento das caixas de liberdade* (1515) in the Ataíde papers, in which the chests (*caixas*) were accorded a stipulated size of 6 *palmas de vara*. Everybody on board was entitled to a *liberdade*: the scale of rights allocated the cabin-boy (*grumete*) one, while a Captain-Major was entitled 15 *caixas* per run of the Carreira da Índia.

¹¹³ Gaspar CORREIA, *Lendas da Índia*, 147-.

¹¹⁴ GODINHO, *Descobrimientos e a Economia Mundial*, vol. II, Editorial ed., 102; Simão BOTELHO in FELNER ed., *Subsídios para a história da Índia Portuguesa*, Lisbon (1868), pte. ii, 28.

¹¹⁵ C.R. de SILVA, 'The Portuguese Impact on the Production and Trade in Sri Lankan Cinnamon in Asia in the Sixteenth and Seventeenth Centuries', *Indica*, (1989), 34.

superior Portuguese naval and ballistic technology, the three-masted sailing ship with mounted cannon, helped drastically to lower the protection costs of the Eurasian spice trade did nothing to lower transfer costs more generally.

Steensgaard turned much of his attentions to the *cartaz* system of monitoring Asian shipping movements in the Indian Ocean through the issue of passports at obligatory ports of call. Here we can see the upshot of the policy of force. Arab shipping continued, but was forced to make huge circumnavigations to avoid Portuguese patrols. Force, perhaps an inevitable conclusion from the liberal position, was applied so indiscriminately in the form of extortion that ships would prefer to risk an encounter with a patrol than enter into port and comply with the regulations. It has been estimated that as much as half the potential *cartaz* revenue was lost in this way.¹¹⁶ On the mainland, as we shall see in section 10.5, a pressured minimal price of spice purchase yielded the Portuguese only the poorest of the available pepper harvest. As the Vedor de Fazenda had noted resignedly in 1532: 'to trade and to fight are more opposed than the north and south poles'.¹¹⁷ We must content ourselves, in conclusion, with talking, like Chaudhuri, of a quasi-monopoly, or perhaps better, a *monopolie manquée*.

Whatever the thoughts revolving in the King's head, the developments following 1505 didn't take the Portuguese Crown much closer to controlling, or dominating the European market of spices, only one step removed from the global market as a whole. Perhaps one significant innovation was engineered; the divorce of the Indies from the Europe trade and their treatment henceforth as autonomous commercial propositions. Private parties could not reclaim their same spices at the Casa da India for European redistribution as if the obligatory sale and re-purchase from the Casa da India was no more than a passing formality. The inauguration of this distinction proved a momentous one in that the Crown felt itself less obliged to intervene personally in active marketing and more inclined to act simply as the articulation between two spheres of private trade, the clutch, if you like, between private trade on the Indies and the European leg. But the clutch was not smooth enough to be relied on, as we shall see, and for this reason the King retained his own redistributive network via Antwerp.

¹¹⁶ Francisco RODRIGUES DE SILVEIRA, *Reformação da Milícia e Governo do Estado da India Oriental*, fls. 133-35, 146-7.

4. THE EVOLVING RE-EXPORT REGIME.

4.1 The decision to create a Crown staple at Antwerp.

We have seen in section 3.5. that the Crown actively marketed its share of colonial goods through its own channels. Caught up with the 1505 decree, the confiscation of the private German spice cargo in 1506 and the move towards sub-contracting arrangements, was - as historiography is keen to accord - the election of Antwerp as Crown staple. This section is dedicated to elucidating, in the absence of an official charter of staple, quite what this amounted to, and to show that even if other sales mechanisms (contracts of lease, open trade) were operating alongside official Crown channels, and even if volumes of sale through the staple fell away after the feitorship of Tomé Lopes, when the Crown had spices to sell that it could not or did not want to pass on to sub-contractors it did so via its factor in Antwerp (the Crown Feitoria). In this sense Antwerp constituted a Crown staple, and which adhered to the time-worn royal prerogative of establishing markets (for a critique of the staple, see section 11.4.).

Previously, of course, the Crown had not chosen to restrict its sales to any one European trading emporium, but had targetted several. The official ordinance of 21 August 1498 detailing sugar export from the island of Madeira suggests that of the 40.000 arrobas it allocated itself, it intended sending 20.000 to Flanders, 15.000 to Venice, 3.000 to England and 2.000 to Rome.¹ Accordingly, we have reference that two of the King's vessels, the *Pantaleone* and the *São Miguel*, sailed from Madeira to Venice between September and October 1498.² What was unprecedented, then, was the decision to patronise the Antwerp market exclusively.

The factual history of this decision is largely out of our reach, though we are to understand that the Portuguese Crown agreed to create a staple there apparently under the advice of the then factor at Antwerp, Tomé Lopes (1 Jan. 1498 - 31 Dec. 1505). Lopes, in his correspondance with the Portuguese King, had stressed the importance of the northern market to the future of the spice trade and evidently argued in favour of having the Germans

¹ SILVA MARQUES, *D.P.*, no. 423, 488 ff.; GAMA BARROS, *Hist. da Administração...*, vol. X, 156.

² cited in B. A. S. Pereira, *Portugal e o Mediterrâneo no século XV. Alguns aspectos diplomáticos e económicos das relações Europeias*, Lisboa: Centro de Estudos da Marinha, Instituto Hidrográfico, (1973), 105, 2870/92585

buy in Antwerp rather than Lisbon.³ There may have been an ulterior reasoning; that the opening of a direct and sustained supply of spices in Antwerp would offer a counterpart to the *tampão* policy in the East that sought to break definitively the Venetian trade, in this case more by the carrot than the stick in that the Germanic customers on whom Venice relied would be enticed away from the lagoon by the cost savings and facility that trade at Antwerp would entail.⁴ At the same time, by concentrating sales at a single point, the Portuguese Crown could avoid the costs of maintaining trading posts elsewhere and which, at least in the case of London, as we learn from a shipment instruction to Falmouth of 1504, was in debt.⁵

Whatever his hypothetical reasoning, Lopes' recommendation appears to have proved sagacious on all counts. Whilst Portuguese Crown trade until then had relied a lot on Venice as a clearing market for her popular shipments of sugar, pepper and most of the choleric spices found their consumers far more readily in northern Europe. Antwerp, moreover, as we shall try to explain in a minute was, at least at face value, the greatest and most dynamic single clearing house for international trade in Europe of its day (proudly considered 'communis omnium nationum mercancia'), accessing a multiplicity of re-distributive overland and water-borne routes thanks to its geographical position in the commercially pivotal delta region of the Rhine, Meuse and Scheldt rivers and its proximity to some of the largest concentrations of population anywhere in Europe. Within easy reach of the North Sea via the estuary of the Scheldt, and yet avoiding the exposure of an open seafront harbour and defencible by stretching heavy chains across the river to hold back seaborne attacks, Antwerp conforms to all the attributes of the classic emporium. The emporium, moreover, offered ready access to financial services more difficult to obtain in Lisbon, and enabled the Crown to transact from the profits of spices without physically displacing bullion up the lawless and stormy Atlantic coast. These were the realities behind the Crown decision to treat

³ where is this correspondance that Donald LACH, 'The Century of Discovery, vol. I of *Asia in the Making of Europe*, repr. (1993), 121 fails to pinpoint? It is not clear but, given the dates of his Antwerp feitorship, doubtful that this is the same Tomé Lopes as that sent to the East as scribe (*escrivão*) in the Estêvão da Gama fleet and which left Lisbon on April 1, 1502, bequeathing us an account via RAMUSIO, *Navigazioni i Viaggi*., Venice (1550) ed., vol. I.

⁴ in a letter of 10 August, 1499, the Florentine merchant Guido Detti had suggested that the Portuguese Crown would be obliged to open a staple somewhere on the Italian market, but that the Florentine authorities should ensure that this be at Porto Pisano. Detti was optimistic that the Fondacho dei Tedeschi could be persuaded to migrate here, in *Relations des expéditions de 1497-99, & 1502-03*, ed. Paul Teyssier & Paul Valentin, 183-188.

⁵ The Calendar of State Papers, Venetian, vol. I, no. 838, p. 300 and dated March 9, 1504, ed. R.H. Tawney and E. Power, *Tudor Economic Documents*, London (1924), section 1 ('Commerce and Colonisation'), #7. But do we know whether this was definitely a state fleet? See, for example, Jorge Caldeira to D. Manuel, July 2, 1505 in *Arquivo Histórico Ultramarino*, vol. 1, p. 1480-1481. See also, *Journal of the Royal Society of Arts*, 1905, p. 35.

Antwerp as a staple market, and that must have been apparent from the time that the first Portuguese spice fleet entered the city on 24 August, 1501.⁶

Marketing in the Low Countries, moreover, had the virtue of a strong precedent. Flanders had been the chosen destination for Portuguese seaborne trade with northern Europe since the eleventh and twelfth centuries.⁷ As the Nuremberg Chronicle reminds us for a period somewhat closer to that of our study, similar goods such as malagueta had been brought to Flemish markets in sizeable quantities (*em grande escala*), if not as a staple, and that redistributive networks were fully in place, both land connections with Cologne, Frankfurt and Nuremberg and by sea, for Flanders served too as a great centre of trade with Hanseatic and English merchants.⁸

Other staples were already in place at Antwerp offering the Portuguese an instructive model, not only in the basics of everyday life (fish, salt, oats), but alum from the papal mines at Tolfa and, perhaps most famously, the cloth staple of the English Merchant Adventurers, which built upon the previously flourishing staple at Bruges, where Castilian wool had been brought to be traded by a privileged *consulado*.⁹ The Adventurers, encharged by the King with the official vent of English woollens, after searching for a permanent mart town at Utrecht, Antwerp and Middleburg for much of the fifteenth century, and having toyed with the idea of a twin in Pisa as a beacon for the Mediterranean market, decided, a mere ten years before the Portuguese, that they were to return to Antwerp in permanence. As with Tomé Lopes' later reasoning, a determining influence on this decision had been the convenient proximity to the merchants of Cologne, who at this time were the main distributors of English cloth in Germany. Privileges were agreed upon with the Antwerp municipality, from which followed the Magnus Intercursus, which in substance was little unlike the set of privileges awarded the Portuguese in 1511.

The recourse to the Antwerp rather than Lisbon market, at a deeper level of

⁶ A. CASTRO, *História Económica de Portugal*, vol. III, 373; MATERNÉ, 'L'Heure d'Anvers, Marché des Épices Portugaises', in *C.G.E.R.*, 170. PIRENNE, *Histoire de Belgique*, 'La Renaissance du Livre' edition, (1972), vol. III, 64 is thus mistaken in ascribing the arrival of the first Portuguese spice fleet to 1503.

⁷ see Luís Adão da FONSECA, *O Tratado de Windsor*, Lisboa: Imp. Nac. (1986), 40.

⁸ SCHEDEL, Hartmann, 'Portugal nās Cronicas de Nuremberg de Hartmann Schedel' ed. J. Mendes de Almeida, in *Arquivo de Bibliografia Portuguesa*, no. 19-20, Coimbra (1959), 214.

⁹ J. MARÉCHAL, 'La colonie espagnole de Bruges, du XIVe au XVIe siècle', in *Revue du Nord*, 35, (1953), 5-40; L. GILLIODTS VAN SEVEREN, *Cartulaire de l'ancien Consulat d'Espagne à Bruges*, Bruges, (1901), 2 vols.; J. FINOT, *Essai de la relation historique sur les relations commerciales entre la Flandre et l'Espagne au Moyen Age*, Paris (1859).
European University Institute DOI: 10.2870/92585

explanation of the Portuguese Crown policy, deals with what Braudel famously entitled 'Capitalism and Dividing Up the World' and is a motif to which we shall return in §4.7. when we shall seek to assess in the last instance what proportion of spices imported into Lisbon passed on to Antwerp. In a powerful chapter summarising the thoughts of a lifetime, Braudel reasserted his conviction that the world can now, as it could then, be aptly divided into world-economies in that these divided entities, fragments of the world, can be said to form economic wholes. Or, more precisely, 'an economically autonomous section of the planet able to provide for most of its needs, a section to which its internal links and exchanges give a certain organic unity'.¹⁰ Now, it is clear, much as Portugal had vastly extended its imperial economy from an initial triangle of modest proportions, the *Méditerranée-Atlantique*, to incorporate the vast and promising Brazilian littoral, that its circuits did not take in the vast majority of its European consumers; not only did these circuits exclude their consumers but, as has already been pointed out, excluded too were the sources of exchange, the central European mines of precious metals on which the Portuguese imperial economy functioned. What this does is to cast doubt on whether the Portuguese Empire really constituted an autonomous world-economy at all, at least in the period that we have come to describe as the *plano das Índias*; whether it might not be better to concede Immanuel Wallerstein's important qualification that, particularly in this initial constructive phase in which much of her 'world' was conquered by force, Portugal is better described as a world-empire than a world-economy.¹¹

This distinction is not merely a play on words. It made itself clear when Portugal, in the first five years of the sixteenth century, tried to patronise Lisbon as the central spice exchange for Europe and failed. It was forced begrudgingly to accept that trade, with all the economic benefits it brings in its train, had to be effectuated at that other pole of growth, of real, economic growth, Antwerp, where the fullest infrastructure for European trade was in place and to which the entire fraternity of European merchants were attracted, as if by a magnet. The Portuguese world-empire, in other words, was a mere part, and one would be tempted to say product, of a European world-economy. Or, to cite Braudel, 'even in the moment of triumph, Lisbon remained the captive of a certain world-economy, into which the

¹⁰ Fernand BRAUDEL, *Afterthoughts on Material Civilisation and Capitalism*, (1977), chap. 3. The idea of *économies mondes* is more elaborately defined in conjunction with three ground rules in vol. 3 of his *Civilisation Matérielle, Économie et Capitalisme* (21-45, English version, 1985) and is taken up elsewhere by CHAUNU in his *Séville et l'Atlantique. Partie interprétative*, Paris: S.E.V.P.E.N. (1959), 4 vols.

city was already integrated and in which it had a fixed place'.¹²

The phenomenon described by Braudel, of a pre-eminent point of commercial activity or, in his terminology, a node, is not a unique, rather a natural state of affairs in capitalist world history. It is misleading to think of Antwerp as Ehrenberg once did, as an 'incomparable city.. such as the world has never again seen'.¹³ Indeed, we can chart a string of successive European capitals, which adhere to Antwerp's specifications. Antwerp, nonetheless, was perhaps the first, if we are to follow Wallerstein's ascription of the origins of the world economic system to the sixteenth century. Elsewhere, Braudel suggests Antwerp emerged from a poly-nuclear Europe of the late Middle Ages; indeed, to some extent this situation carried through into the first half of the sixteenth century with Venice sharing, as we shall see, many of those attributes preeminently held by Antwerp.

Braudel's conclusions draw upon a whole body of economic theory which explores 'the suction and force of attraction of these poles of growth'.¹⁴ And even if one is forced to retract from the economic reasoning, or, as seems to have become the norm in the dependency debate, ideological posturing, other historians have drawn similar conclusions at a descriptive level concerning the configurations of the European economy. Van der Kooy, for instance, analyses Amsterdam's trade of the seventeenth century in terms of a singular point of European redistribution.¹⁵

Let us try to see how the capitalist division of the world manifested itself in terms of

¹² BRAUDEL, 143, vol. III. *Civilisation and Capitalism*. The implications of such a conclusion are enormous. If we are to go along with Braudel's and Wallerstein's insistence on the primacy of the economic order, would we not be in a position to replace the idea of a Portuguese empire in the east? Chaudhuri nevertheless reminds us of the parallel notions of centrality and the hierarchical ordering of spatial units articulated to the structure of the state; thus, he concludes, 'The dominant positions of power.. are not always expressed through economic relationships. These can be political, religious, cultural and linguistic'. K.N. CHAUDHURI, *Asia before Europe. Economy and Civilisation of the Indian Ocean from the Rise of Islam to 1750*, (Cambridge University Press: 1990), 385.

The issue of whether Portugal ever constituted a world-economy has been pursued elsewhere by specialist historians on Portuguese imperial history, notably Frédéric MAURO, 'L'économie portugaise, a-t-elle été a quelque moment de son histoire une économie monde?', *Actes d'une Conférence*, Fondation Calouste Gulbenkian. Luís Adão da FONSECA has been responsible for the formulation of the idea of a *grand espace maritime méditerranée-atlantique* taking as its three points the Azores, the Cape Verdes and Gibraltar; see Fonseca's 'La découverte de l'espace Atlantique', *Cadmos*, no. 53, printemps 1991, 11-25.

¹³ EHRENBERG, *Zeitalter der Fugger*., trans. as *Capital and Finance in the Age of the Renaissance*, New York (1928), 238.

¹⁴ A. EMMANUEL, *L'Echange inégal*, (1969), 43.

¹⁵ VAN DER KOOY, *Hollands stapelmarkt en haar verval*, Amsterdam (1931) and 'Holland als centrale Stapelmarkt in de zeventiende en achttiende eeuw', in P.W. KLEIN, *Van Stapelmarkt tot Welvaartstaat*, Rotterdam (1979), 9-20. See also the review by Jonathan ISRAEL, *Dutch Primacy in World Trade*, Cambridge (1985), 14.

the roles it attributed to those competing centres of the European spice trade, Lisbon and Antwerp. Both Lisbon and Antwerp are singled out by neutral contemporary observers as notable centres of trade. But if Lisbon was commonly rated as one of the most active ports of Europe, Antwerp was accorded the superlatives - the 'mistress of European cities' even, in the words of the Venetian ambassador to the court of Charles V, 'the greatest marketplace in the world' (*la maggior piazza del mondo*). A few years earlier, another returning Venetian diplomat, Marino Cavalli, felt that Antwerp could only be compared with Venice as far as trade was concerned. Venice and Antwerp, then, were perceived - as good an indication as any other - as the hubs of European trade and capitalist life, a hint of the binuclear if not poly-nuclear European model to which Braudel alludes.¹⁶ But for the purposes of this investigation, one must ask what were the specific elements that distinguished Antwerp from Lisbon, and which compelled international mercantile activity - including the spice trade - to operate through the Scheldt city.

Indicative were the manufacturing industries that sprang up around Antwerp in the wake of the colonial products that Portugal sent on to Flanders. Sugar refining is perhaps the best example, so assiduously developed in the Flemish port by Pierre van den Broecke, but of which others, such as the *suikerhuis* installed by Giovanni Balbani at Rue du Fagot and operative by 1545, are easy to name.¹⁷ Only in 1559 do we have the first record of a sugar refiner, a Venetian one interestingly enough, setting up trade in the Portuguese capital; but the fruits of his labours were not universally appreciated, the Spanish author of the *Memoria de las mercaderías que entran en el Reyno. .*, which Francis Brumont perhaps mistakenly dates between 1548-58, suggesting that 'the sugar refined in Lisbon. . is deceiving and bad' (*el açucar que se rrefina en Lisboa; es muy engañosa y mala*).¹⁸ It must have been

¹⁶ For Antwerp, see the hymn of praise in A. GOVEA, *Histoire orientale des grands progrès de l'église*, cited in G. ATKINSON, *Les nouveaux horizons de la Renaissance française*, Paris (1935), 132. The further two citations come from, first, *Relatione del clarissimo messer Federigo Badavaro, ritornato ambasciatore della serenissima republica venetiana da Carlo Quinto et da Filippo rei di Spagna, l'anno MDLVII (1557)*, Bibliotheque royale de Bruxelles, manuscript no. 6085 bis, fol. 61v; the second figures in *Le Relazioni degli Ambasciatori al Senato (1839-53)*, ed. E. Alberi, II, 198-204. It is noteworthy that Portuguese visitors to Venice were simply overwhelmed by its wealth and size, see for example Frei Pantaleão de AVEIRO, *Itinerario da Terra Sancta*, ed. A. BAIÃO, Coimbra (1927), ch. 1 and Mestre AFONSO, *Itinerário da India a Portugal por terra*, ed. BAIÃO, Coimbra (1923), ch. 6.

¹⁷ 'Receuil des Bulletins de la propriété', *L'Escaut*, Antwerp (1885), 72-73; M. MAZZOLANI, 'I Balbani nella Germania inferiore', in *Bollettino storico lucchese*, X, (1938), 18-47. The expertise was passed on to the emerging entrepot of Amsterdam; in 1622, there were 25 sugar refineries in that city. E.E. RICH, 'Colonial Settlement and its Labour Problems', in E.E. RICH and Charles H. WILSON eds., 'The Economy of Expanding Europe in the 16th and 17th Centuries', *Cambridge Economic History of Europe*, vol. IV, 302-73:

¹⁸ mentioned in passing by the French ambassador to the Portuguese court, Edmund FALGAIROLLE ed., *Jean Nicot (1897)*, LXIV-LXV; Francis BRUMONT, 'El comercio exterior castellano a mediados del siglo XVI: Un estudio de las mercaderías que entran en el Reyno', in Hilario ALONSO CASADO, *Crónicas de Europa*.

shortlived, for the honour of the first Portuguese sugar refinery is more conventionally accorded Cristiano Henriques Smith, who was only issued a permit by Pombal's *Junta do Comércio* two hundred years later, on July 14, 1759.¹⁹

Such institutions caramelised and preserved a variety of eastern delicacies, tailoring them to the whims of the European luxury market of the day. It was at this stage of the economic chain that the largest profits were to be made; around 1674-75 *geconfijte gember* commonly sold for at least five times the price of the raw commodity, dry ginger (*droge gember*), while refined sugar (*raffinade*) sold for 25% more than the price of Brazilian white sugar in the 1620s, and white candy as much as 80% more.²⁰

Venice, however, remained firmly the European centre of pharmaceutical production, that is the purification and preparation of compound medicines consequently distributed across Europe. This, Timothy Bright could affirm without hesitation in 1580.²¹ The production of Theriaca Veneta, which the Republic had been quick to monopolize through favoured pharmacies, succeeded in supplanting Levantine substitutes by around 1500, and can be found as far afield as Transylvania.²² Other imported raw materials, over which Venice held a virtual monopoly, such as borax, were purified here - the process was veiled in such secrecy that the mineral was commonly thought to be an artificial material - while others, such as lapis lazuli, were manufactured into pigment.²³

Venetian supremacy in the pharmacognostical field extended itself to the principal texts on herbal recognition and preparation. Perhaps the most widely consulted pharmacopeia of the first half of the sixteenth century, the *Lumen Apothecariorum*, or *Luminare Majus*, was published in Venice in multiple editions after its initial appearance in 1496, and travelled across Europe. It was adopted by the Nuremberg city authorities as the official dispensatory in 1529; two copies were held in the Braşov pharmacy according to the inventory of 1576, long after western Europe had officially shifted to subsequent versions, primarily the

Comercio y Mercaderes en los siglos XIV, XV y XVI, Burgos: Excma. Diputación Provincial de Burgos, (1995), 179 ff.

¹⁹ José CALVET DE MAGALHÃES, *História do Pensamento Económico em Portugal*, 163.

²⁰ N.W. POSTHUMUS, *Inquiry into the History of Prices in Holland*, Leyden (1946), vol. I.

²¹ Timothy BRIGHT, *A Treatise, wherein is declared the sufficiency of English medicines for cure of all diseases, cured with medicine*, (1580), 14.

²² Eva CRIŞAN, *Materia Medica de Transylvanie*, Cluj-Napoca (1996).

²³ A *Treatise concerning the Art of Lijvinge*, written by N. Hilliard, ed. trans. and with introductory and concluding notes by P. Norman in the *Journal of the Walpole Society*, 1. (1912). DOI: 10.2870/92585

Dispensatorium pharmacorum omnium of Valerius Cordus, which was first published in Nuremberg in 1535.²⁴

One might also mention that Venice provided much of Central Europe with its pharmacy jars during this period. The collection of the Arany Sas pharmacy museum in Buda, for example, evidences the import of albarello faience jars ‘alla porcelana’ from the Venetian province of Portogruaro. Only from the beginning of the seventeenth century did domestic *habán* (a German Anabaptist sect) artisans take up the production of glazed ceramics.²⁵

But the manufacturing industries working specifically Portugese colonial goods sprang up pre-eminently in the Low Countries. Diamond cutting and polishing, in 1582 elevated to the status of corporation, if dominated by Portuguese master lapidarists such as Simão and Thomaz Brandão, was based at Antwerp rather than Lisbon. The same was true for pearl cutting (*parelgers*), similarly corporatised in 1610.²⁶ Amsterdam later inherited many of these specialisations directly from Antwerp, adding new ones, such as the manufacture of dry-process vermilion, but which reflected the importance of the dyeing industry in that part of the world, which was primarily directed towards English cloths traditionally prepared in Antwerp or Mechelen and which attracted before the success of indigo and new imperial dyestuffs much of the substantial French export of traditional dyestuffs: scarlet of Languedoc and Provence, the famous ‘wood’ (woad) of Toulouse and from Normandy, also *fuset* and *fenu grec* from the Île-de-France and the South, not to mention madder.²⁷

We could list other, similar indicators, though struggle to find simple answers to this pattern of hierarchically ordered economic hubs; as a historian, it might be easiest to explain this phenomenon in terms of a complex mesh of precedent, for Antwerp inherited much of its status from the trade that was already conducted at Bruges, with strategic geographical positioning next to some of Europe’s densest concentrations of population, with the unparalleled scope of financial, legal and political freedoms with which Antwerp was

²⁴ It has been suggested that Paulo Suardo’s *Tesarus Aromatiorum*, published in 1517, was also exported to Germany as a *testa guida*, *Per una storia della farmacia...*, 10.

²⁵ *Orvostörténeti közlemények (Communicationes de Historia Artis Medicinae)*; Supplementum 5, ed. József Antall, Budapest (1972), sec. §6, 39-41.

²⁶ needs to be compared with the community of Flemish goldsmiths and jewellers based in Lisbon, as described by E. STOLS, ‘Os mercadores flamengos em Portugal e no Brasil antes das conquistas holandesas’ in *Anais de História*, Assisi (1973), 17.

²⁷ VAN SCHENDEL, A.F.E., ‘Manufacture of Vermilion in 17th-century Amsterdam. The Pekstok Papers’, *Studies in Conservation*, 17, (1972), 70-82; P. BOISSONNADE, ‘Le mouvement commercial entre la France et les îles britanniques au XVIe siècle’, *Revue Historique*, t. CXXXV, 2-3, drawing on GUICCIARDINI’s *Belgium, Unversum seu omnium inferioris Germaniae regionum accurata descriptio, tabulis geographicis...* (1580), *Estabelecimento de Janssonius*, 1646, 101, col. 1 & 2.

endowed. The fact that taxes were minimal as from 1396, that there were no restrictions on trade in money, that trade was free for all times of the year, that foreigners of all provenance were welcomed and protected under far-reaching privileges: these are some of the concrete attributes that mark Antwerp out from other European trading centres of this period.

In the light of all of these circumstances and justifications, I think that the King, as far as he was able to exert an influence, and certainly as far as those spices marketed through his own networks and not those of his contractors are concerned, concentrated his attentions on the international market at Antwerp. We have been hypothesizing as no charter of staple has to date been discovered but, as we have suggested, even if alternative sales mechanisms were operative, the Portuguese Crown continued to treat Antwerp as the exclusive outlet for spices that he could not sell on to subcontractors. This would seem to concur with readily available evidence such as Guicciardini's reading of the Portuguese policy, which entailed sending a factor to Antwerp with the goods, 'by which means it drew all Nations thyther'.²⁸ Or else the Portuguese King's threat, with the disruptions surrounding the Antwerp trial of the suspected crypto-Jew and contracted redistributor of spices, Diogo Mendes, to 'move the spice trade and business to another place' (*muer le train et affaire d'espéceries en quelques autre lieu*) if his subjects continued to be importuned.²⁹

Materné's suggestion that the Portuguese Crown began actively to market via Bayonne, Marseille and Italian ports, including Venice, particularly with the political 'difficulties' and ensuing piracy of the 1520s and 1530s puts his finger on a time of troubles for the Portuguese Crown, but this does not really stand up as a systematic policy switch, particularly with the justification offered, that the Portuguese Crown thought it necessary to challenge the recent influxes of spices brought in on the recently revived Levantine routes in Italian and southern French markets, is interesting.³⁰ It is true that a *feitor* of the Portuguese Crown is recorded in Marseille in 1524, but if the Flanders fleet was held up in Bayonne in

²⁸ Lodovico GUICCIARDINI, *Description of the Low Countreys*, London (1593) repr. Theatrum Orbis Terrarum, Amsterdam (1976), 27.

²⁹ extract of letter sent from the Portuguese King to his Antwerp factor, published in *Bulletin des Archives d'Anvers* and here summarised by DENUCÉ, *Inventaire des Affaitadi, banquiers italiens à Anvers, de l'année 1568*, Antwerp: De Sikkel (1934), 21.

³⁰ MATERNÉ, 'L'Heure de Anvers', in *C.G.E.R.*, 174; MATERNÉ & VAN DER WEE, 'Antwerp as a World Market in the Sixteenth and Seventeenth Centuries', in Jan VAN DER STOCK ed. *Antwerp: story of a metropolis. 16th-17th century*, catalogue from an exhibition held Antwerp 25 June - 10 October 1993, 22 and *ibidem*. 'Antwerpen als Internationaler Markt im 16. und 17. Jahrhundert', (1995), 481. They may, of course, be mis-interpreting the Crown's (2001) Portuguese marketing for the activities of private redistributors who were clearly not constrained to sell at Antwerp.

1526, this was a one-off and, as the letter from Juan Zuñiga testifies, was a result of fearing French pirates rather than an active marketing operation.³¹ Thereafter, there is a letter of October 1531 from a Francisco de Mesquita in La Rochelle, *escrivão da feitoria*, indicating that ships had left for Portugal with goods to buy spices, and at almost the same time a letter from the Portuguese envoy, Gaspar Vaz, proposing a *feitoria portuguesa* in Rouen largely as a political tool to resolve the contentions.³² But if the latter never came off, the former would again scarcely amount to 'active marketing' and was clearly permitted only in response to political constraints. As later events testify, there was almost certainly some kind of embargo during the years of active deprivations by Breton pirates, as authorisation of sale of 3 - 4.000 cruzados' worth of pepper to 'merchants of the French Crown' according to the Casa da India price was one of the exceptional bargaining ploys granted Rui Fernandes de Almada in his diplomatic mission to the French court early in 1534.³³ It seems the lobbying for such a concession was undertaken principally from the French side; ten years later, D. João III was reminded of an offer to French merchants to come and buy pepper at the Casa da India by the ambassador of François I, Honorato de Caix, but the King was severe, demanding that Ango come in person to Lisbon to make amends (*requerir justiça*) and that the letters of mark be called short.³⁴

All other records of monarchical sales would appear to be singular. Notice of a stock of Atlantic pepper stored (*entreposait*) on the King of Portugal's account by a certain Grimon Ayquem, Seigneur de Montaigne in 1510 is a one-off and we have no indication whether it was for sale; it may have been rescued from a damaged vessel that put in to Bordeaux and was simply awaiting trans-shipment.³⁵ Or it may have been an exemption, some kind of personal favour, as we find for example with the Medici bank, who were permitted to buy English wool in Southampton rather than through the Merchant Adventurers' staple in Flanders. And the ship that returned from Cochin and Cannanore in 1514 carrying brazil wood and other articles loaded in South America, and sailing directly without calling at

³¹ Carta de quitação de 30 Maio in FREIRE, A.H.P., VIII, d. 668, 410; letter to the Emperor, 28 March 1526, A.G. de Simancas, Estado, leg. 368, fl. 20.

³² C.C. III, m. 5, d. 32; carta de 19 Out. de 1531, C.C. I, m. 47, d. 75.

³³ M. BARATA, *Rui Fernandes de Almada*, 1971, 28 from a set of instructions entrusted him ('Despacho que foi a R.F. em maio de 1534') and now in Bibliotheca de Évora, cod. IX, liv. XV.

³⁴ GOMES DE CARVALHO, *Dom João e os Franceses* (1909), 122 and 'Carta de-ci rei ao bispo de Tanger', de 2 de agosto de 1544, Gaveta 13, maço 9, doc. 17.

³⁵ Théophile MALZEVIN, *Histoire des Juifs à Bordeaux*, Bordeaux: J. efebvre (1875), 250 taken from Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580. DOI: 10.2870/92585
 Archives départementales de la Gironde, 3 E 4470, fo. 9, vo. 4, 4 April 1510.

Lisbon to the Fondacho dei Tedeschi in Venice, might have been a private Italian vessel given leave to sail with the Indies fleet, but making its own return voyage.³⁶

4.2. The Feitoria de Flandres and its intermediary role in the sales and redistribution of Portuguese spices.

As a body of Portuguese merchants in the Low Countries under a royally appointed official, the Feitoria existed to offer mutual support and to campaign effectively with the governing authorities for the ascription of legally enshrined collective rights covering residence, duty exemptions etc.. The community revolved around an official seat, with its own chapel, and offered accomodation to passing merchants. In return for enjoying the privileges (*as fóras da nação*), Portuguese merchants were obliged to pay a levy on the goods they transported to the ports of Flanders to the Feitoria's coffers (*na bolsa*).³⁷

The Portuguese Feitoria de Flandres had existed for a long time. Even if formal recognition only extends as far back as the letter of privileges granted by the Duke of Burgundy to Portuguese subjects on December 26, 1411, there was most probably a *feitoria* at Bruges from the end of the fourteenth century.³⁸ Over the course of the last decade of the fifteenth century, Portuguese merchants transferred themselves from Bruges to Antwerp; with them shifted the *feitoria*, though it is more difficult to pinpoint a date for its precise transferral, be it in 1494 with the naming of the first Portuguese factor, Manuel Fernandez, or, as is more conventionally regarded, the appointment in 1499 of Tomé Lopes, who was given a clear charge by the King which ran from January 1, 1498 until the end of 1505.³⁹ Other historians view the grant of a permanent seat at Kipdorp, feted with solemn civic

³⁶ 'Aviso da Lisbona de dii 15. luio (*sic*) 1514 dil carico delle barze venute de Imdia adirita in Venesia in fonticho', in GUBERNATIS, *Storia dei viaggiatori italiani.* ., 380.

³⁷ see, for example, A.N.T.T., C.F.P.A., caixa 3, doc. 9.

³⁸ *Descobrimentos Portugueses.* ., suppl. to vol. 1, 83 ff., 130-1. A.N.T.T. *Casa da Feitoria Portuguesa*, caixa III. doc. no. 15. The original French version of the text can be found in maço B, no. 4 of the same collection.

³⁹ Manuel Fernandez has been confused with Diego Fernandez. EHRENBERG, *Zeitalter der Fugger*, II, 4, footnote. DOEHAERD draws attention to a Diogo Fernandes trading privately in Antwerp in 1492, tom. I, 114. Tomé Lopes' charge is to be found in A.N.T.T., Chanc. de D. Manuel I; L. 36, fl. 15v. A privilege from Emperor Maximilian dated June 30, 1488, formally transfers Portuguese *regalias* from Bruges to Antwerp, C.F.P.A. cx. 3, m. 5, no. 25. Despite the migration of the trading community, royal upkeep of the Portuguese church in Bruges was not confirmed as Portugal and the European spice trade, 1480-1980 and was only transferred in January 1574, see Inventory of caixa 4, C.F.P.A., no. 68.

ceremony on 20 November, 1511, as the formal inauguration of the Feitoria's activities.⁴⁰ As we have seen, however, primary sources implicate the active intervention of *le facteur du Roy de Portugal* in the spice trade from the Rechtergem sale in 1503.⁴¹

The King administered his sales at Antwerp through his factor, whose position at the head of the Portuguese trading community there was transformed in one leap by this charge. His role no longer afforded him the time to consecrate his attentions to the trading community's collective interests, which he left to the internally elected consuls; he was ever more responsible, correspondingly, for the King's personal business alone. This distinction has encouraged me to speak of the Crown Feitoria independently to that of the Feitoria per se, if formally it might be somewhat difficult to identify the 'body' of the Crown Feitoria as such.

The role of the feitor.

Who was this *feitor*? He was a direct official of the King, commonly a member of the lesser nobility (*pequena nobreza*), having ascended ranks through the government bureaucracy as a scribe or secretary (*escrivão da camara*). Often he is referred to as the *apaniguado do Rei*, quite literally, the King's appendage, at other times as 'nostra rerū in flandria negotiatore'.⁴²

Was he unique? It is often stated that feitors were maintained in Venice and Florence equally, and as we have seen, occasionally undertook missions to Marseille and elsewhere. On closer look, the trading representatives the Crown employed in Italy appear to have been little more than commission merchants - for example, a certain Matheus Florentino, described as *nosso agente em Veneza* in a letter to the Venetian Doge Agostinho Barbado in 1498 -

⁴⁰ EHRENBERG, *Zeitalter der Fugger*. ., trans. as *Capital and Finance in the Age of the Renaissance*, New York (1928), Book 2, 4, #2; AZEVEDO, *Epocas de Portugal económico: esboços de história*, Lisbon (1947), 114. It is a mystery why some historians such as Materné and Gramulla attribute the functioning of the Crown Feitoria dates to as late as 1508. The donation of the building at Kipdorp was accompanied by a fresh round of privileges, see C.F.P.A., Livro F., fol. 333.

⁴¹ Gertrug Susanna GRAMULLA, *Handelsbeziehungen Kölner Kaufleute zwischen 1500 und 1650*, Köln-Vienna (1972), 318; L. GUICCIARDINI, *Descrittione di tutti i Paesi Bassi*, Antwerp (1567), 130.

⁴² Carta do Rei D. João III ao Cardinal Wolsey, Coimbra, Sept. 10, 1527, B.L. Cotton, Nery, B I, fol. 64; João Brandão is referred to as *negotiatoris nostri* in a strange Latin facsimile of a letter from the Antwerp city archives, signed by Dom João III and sent from Évora on February 17, 1524 to some high-ranking official in the Estado da Índia, in Albert de Burbure de WESEMBEEK, *La Casa de Portugal d'Anvers. Histoire de trois siècles d'activité*, Bruxelles, Edition de la revue *Portugal-Belgique*, (1953), 13. DOI: 10.2870/92585

and in this case not even Portuguese.⁴³ Not only did the Antwerp feitor emanate from the royal household, but his position in Antwerp was a very special one as representative of the King's direct interests directly alongside the two elected heads of the collective Portuguese trading interest in the respective city and beyond that, the country at large.⁴⁴ As we shall see later on (§11.2.), this created on occasion conflicts of competence, as the distinction between private collective and public royal concerns was not always a clear one. And within the framework of his duties to the King, the factor had to fulfil the role of both diplomat, political informer and manager of the King's personal financial and economic interests. His correspondance with the Crown, and I am thinking particularly of the twenty-one long letters bequeathed us by Rui Fernandez between 1521 - 1527, amply demonstrates this often muddled medley of activities.

As far as the factor's economic tasks went, beyond catering for the royal house's personal fancies, he commonly had to both freight ships for trade and sell off the King's share of spices, and often was instructed to sell off other parties' shares such as that of Gonçalo Alvares, chief navigator, as well as canvass large-scale prospective buyers or, better still, organise reciprocal contracts. But selling spices - as we wish to assert once again - was just one of his many functions; indeed, selling seems to have been merely tagged on to other weightier tasks of the factor, for the *feitor* emerged gradually over the course of the fifteenth century principally from the *procurador*, a retainer sent to procure certain goods from certain markets for the needs of the King and his family.⁴⁵ Manuel Cerne was described as *Joannis tertie regis Lusitaniae apud Antverpiam negotiarum procurator, sive factor* as late as 1540.⁴⁶

Purchases, rather than sales, then, had constituted the given historical priority. But although marketing as an autonomous branch of the practice of commerce is very much a

⁴³ signed by the Queen Regent in Lisbon on 6 September 1498, vol. 2 of *Diario di Marino Sanuto*, Venice (1878) and translated from the Latin into Portuguese by SOUSA VITERBO, *Artes Industriaes e industrias portuguezas: a industria sacharina*, Coimbra, Imprensa da Universidade (1908), 9.

⁴⁴ for an idea as to the conditions of employment offered the factor, see the 'Trelado doutro alvara del Rey do hordenado e mâtimento de feitor a João brãdão', dated 1509, in *A.H.P.*, t. VII, doc. XXXIII, 74 ff. The salary was maintained 'na maneira que o ouverão os outros nossos feitores', FREIRE, *Notícias da Feitoria de Flandres*, Lisbon (1920), 93. Royal appointments (as of Tomé Lopes, see above) are probably as good a place as any to find a full list of charges with which the *feitor* was endowed.

⁴⁵ GUICCIARDINI, as cited in WESEMBEEK. *La Casa de Portugal d'Anvers.* ., 22, describes the function of the *feitor* very much in these terms: 'lequel a suffi procuration uès certaine de son maître, pour pouvoir prendre telle somme et quantité qu'il voudra et de deniers et de marchandise, obligeant le couronne de Portugal'.

⁴⁶ from the memoirs of the famous physician João Rodrigues de Castello Branco, otherwise known as Amato Lusitano. *Europe in the 16th Century*, Portugal and the European spice-trade, 1480-1580. (Antwerp. 1895), 36.

twentieth-century creation, efforts were made to actively engage the feitor in selling spices, particularly in the period that the Feitoria was promoted. From 1511, the King abolished the factor's fixed salary and demanded that he earn his keep from a 1% cut on all merchandise sold through his efforts in the Low Countries; though, for whatever reason, fixed salaries reappeared by the time of Francesco Pessoa, who was given 40 *milraes* in 1518 (c. 100 cruzados according to the conversion rate of 1514) for his duties.⁴⁷

Sales of oriental spices through the Crown Feitoria.

The only firm source on which we can estimate the quantitative turnover of the crown feitoria are the official *cartas de quitação* surrendered by the factor on completion of office, and which have been published by Anselmo Braamcamp Freire and compounded by Manuel Nunes Dias, and which are set out below.⁴⁸

⁴⁷ A: Braamcamp FREIRE, *Notícias da Feitoria de Flandres.*., 93.

⁴⁸ *Cartas de quitação del-Rei Dom Manuel*, nos. 584, 15, 350, and at A.H.P., t. VII, doc. LIII, 321 ss.; Manuel NUNES DIAS, 'Movimento da Feitoria de Antuérpia em Especiarias', *O Capitalismo Monárquico Português*, (1963), 290-291, Portugal and the European spice trade, 1480-1580
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Table 3. Movement of spices (in quintals) through the Crown Feitoria, 1498-1549.

FACTOR.	PEPPER.	MISC. SPICES (incl. malagueta).	TOTAL.
Tomé LOPES	19,600	8,400	28,000
Afonso MARTINS	915	671	1586
Álvaro VAZ			
João BRANDÃO	221	3187	3408
Silvestre NUNES			
Francisco PESSOA			
João BRANDÃO	499	101	600
Rui FERNANDES			
Jorge de BARROS			
Manuel CIRNE			
João REBELO			

nb. I have assumed, following Affaitati and Ca' Masser, that 1 Portuguese quintal = 168 *libbre*, SANUTO, *I Diarii* .. vol. 5. 133.

As can be seen, only four sets of accounts have been found, and even here Nunes Dias warns us to be on our guard: instead of the official stamp of sanction from the royal audit office (*contadoria régia*), the accounts were signed off 'and in this way he received many other things as is more widely testified by the settling of his account' (*e asy recebeu outras muitas cousas segundo mais largamente se mostra pella arrecadação de sua conta*).

But even then, how can we explain that such an insignificant share of overall trade passed through the factor's hands? Curiously, the quantities shifted by so-called buyers-at-auction (*arrematadores*) like the Frescobaldi from 1511 until 1517 do not appear on the *cartas de quitação*, even if the company was operating at Antwerp, and it would seem logical that the auctions which their status indicates would have been conducted by the feitoria. This was not the case, however - the bids must have been made in Lisbon - and the Frescobaldi

case and the *cartas de quitação* more generally only reveal what a lame duck the Antwerp crown feitoria was in terms of a sales outlet for spices from close to its very beginnings, if one that continued to hobble until its revocation after almost half a century's service.

Jan Kieniewicz has drawn attention rather to the spices that continued to be sold through the Casa da Índia at Lisbon.⁴⁹

Table 4. Movement of spices (in quintals) through the Casa da Índia, 1503-1519.

	Quantity of spices (in quintals)
1503-4	14,923
1505	7,466
1506-7	16,584
1508-11	1,000
1510-11	1,429
1517-19	62,262

These, if we are to follow his logic, would have been the fruits of open trade, whilst those from contracting trade would have flowed directly into the Treasury (*Fazenda Real*).⁵⁰ About this argument I am not so sure. The letter from the officials of the Casa da Índia to D. Manuel informing him of the state of accounts in 1510 makes it clear that contracts were handled through the Casa da Índia, and the 1513 contract with the Affaitati stipulated that the *asiento* be registered in an official *Livro de Contrautos* kept in the Casa da Índia.⁵¹ But in any case, and as further sources confirm for the period that immediately follows that surveyed by Kieniewicz, and even before piracy rendered Portuguese shipping on the run up to Flanders thoroughly impractical (see Chapter 12), the figures stand as proof that spices were

⁴⁹ J. KIENIEWICZ, 'Droga do Indii i Handel korzenny w latach 1498-1522', *Przegląd Historyczny*, LV, no. 2 (1964), Tabela 3, 583, drawn from *cartas de quitação* nos. 223, 423, 603, and 649 but differing slightly from the calculations made by Viriato Alberto da SILVA, 'Pimenta recebida na Casa da Índia e Mina', in *O comércio de Portugal com a Europa (primeira metade de XVI)*, tese de licenciatura, Faculdade de Letras, Universidade Clássica de Lisboa, cota D.L. 1948-H-2, 15.

⁵⁰ KIENIEWICZ, 'Droga do Indii i Handel korzenny w latach 1498-1522', 583.

changing hands at Lisbon and not at Antwerp.⁵²

At first sight, does this not appear to contravene the lengthy arguments we were making at the beginning of this chapter: that of the ‘suction and force of attraction’ exercised by the Antwerp market? And the corresponding argument made on page 72, that Portugal tried to nominate Lisbon as the central spice exchange for Europe in the first five years of the sixteenth century and failed? Unfortunately, the picture is more complicated. As we shall see in Chapter 6, the complications in the Portuguese-German trading relationship during the 1520s led to the steady retraction of exchange between these two actors again to Antwerp, and even dealings with the Affaitati shifted somewhat to the North following Giovan Carlo’s move in 1514.

In short, it is a confusing and complicated picture that emerges. As we shall reiterate at the conclusion to §6.1. contract trade was in any case a flimsy, highly circumstantial form of trade; perhaps the place of exchange is not even of primary importance, but rather the terms of trade and the movements of capital itself which, as we saw in the case of the manufacturing industries that emerged at Antwerp, could add a value increment as high as 80%.

4.3. Between private and public trade: sub-contracting the rights to re-export trade.

The truth immediately following the Almeida débâcle is nevertheless that rather than patronising the Crown Feitoria in Antwerp heavily, the Crown settled for the facility of selling spices from the Casa da Índia, the greater the quantity and the more long-term and hence stable the arrangement the better. These agreements and their reciprocal obligations were enshrined in contracts; indeed, starting with the contract concluded with Bertholameu Marchionni on April 10, 1505, and succeeded by a six year purchasing agreement with the Affaitadi, one can quite persuasively talk of a new era in marketing strategy, one which might be coined contract trade.⁵³

Indeed, a cursory look at the itemised list of contracts sent the King in October 1510 and their implications for financial movements across the Casa da Índia only confirms the

⁵² see, for example, the set of transactions compiled at the Casa da Índia for the year 1522, M.E.C.F. ‘Casa da Índia’, in *Dicionário de História de Portugal*, II, 510. If we look at the records of João Brandão’s feitorship (December 1520 - September 1526), receipts from the sale of goods amounts to a meagre 8.6% of turnover (see Appendix 3).

vigour of this policy shift.⁵⁴ Elsewhere, Kieniewicz has put together statistics that confirm the effective take-off of contract trade.⁵⁵

Table 5. Value of spices contracted (in reais), 1504-1519.

1504-1506	71 296 656
1507-1510	36 840 355
1509-1511	43 396 245
1517-1519	509 467 161

How the contracts worked will be analysed in Chapter 6. But it is worth stating that the contracts took on ever more the form of a lease, from the intervention of the High German consortiums who demanded exclusive rights on Portuguese spices, to the New Christians in the 1520s whose consortiums were of such a scale that they could meaningfully dominate the trade. And leases were no new phenomenon in the Portuguese economy, to reap easy profits for the government without the outlay or necessary bureaucratic infrastructure that direct government supervision would have entailed. The export and re-export trades were no exception, as Lisbon was not sufficiently an emporium for the market to take care of itself. At the same time, by virtue of leasing out its rights often exclusively to a single commercial entity, the government could keep an eye and thus a measure of control over both its leasee's performance as well as the commodity's market movements more generally.

The Portuguese Crown leased out trading and fishing rights for coral, for ivory, woad, cork and sugar.⁵⁶ If there had initially been a little restiveness manifested by the *Cortes* at the idea of exclusive leases, as occurred in 1473, nothing stopped foreigners, particularly Italians, from enjoying the King's favour. Often, concessions which had been passed down with heredity were traded, as we find in the case of Andrea Saccona, who bought from the Duke of Beja. Sometimes these rights were paid for in specie, on other occasions the

⁵⁴ A.N.T.T., C.C. pte I, m. 9, doc. 78.

⁵⁵ J. KIENIEWICZ, *Droga do Indii* .., 583.

⁵⁶ for coral, a lease was granted Bartolomeu Florentim (probably Marchionni) and Jean Forbin of Marseilles in 1443 to fish in Portuguese ships, *Arquivo Histórico Portugues*, vol. I, no. 9, Sept. 1903, 315-18; an exclusive lease on ivory was made to Martin Boa Viagem in 1473, *Monumenta Missionaria Africana*, 2a serie, I, 452-53; in 1490, a Genoese of Seville, Andrea Saccona, bought the exclusive export rights on woad, Prospero PERAGALLO, *Cenni intorno alla colonia italiana in Portogallo*, Genoa (1907), 59. See also F. BORLANDI, 'Note per la storia della produzione e del consumo di una materia prima. Il guado nel medio evo', in *Studi in onore di Gino Luzzatto* (Milan, 1949), 149-50; Halikowski-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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contracts stipulated payment in kind, the delivery of goods of which the Portuguese Crown regularly found itself in short supply. This was the case of the monopoly concession on Portuguese cork that ran from 1483/4 to the end of the century, which was granted in exchange for copper needed for artillery and munitions.⁵⁷ We will see this form of contract replicated in the spice trade.

If domestic trades could not equal the sheer volumes of commodities moved by the terms of the spice deals, the complexity rarely matches the contract for 30.000 *arrobas* of sugar (7500 quintals) signed with J.F. Affaitati and others in 1502, and which stated the precise markets to which the sugar was to be brought, namely Aigues Mortes and thence to Lyon, Venice and Rome. Others were projected over as long a four or five year period. The international contracting system of alum from the papal mines at Tolfa would appear to be one of the few valid comparisons. But in many other respects the contract trade for spices was unique.

But the contract trade seems never to have become a particularly stable form of exchange. As we shall see in the next chapter, the Portuguese Crown found itself caught between different competing consortiums of merchant capitalists. This did not represent a successful policy of *'divide et impera'*, indeed it exposes some of the quarrels underlying with regard to particular terms, failings in honouring or delivering the terms of contract, and instabilities and rapid reconfigurations at this top level of capitalist enterprise.

What was the essence of these disputes? Perhaps the fact that although the Crown preferred to negotiate with well-established Italian contractors like the Affaitati than with the Germans, at least following the Almeida debacle of 1505, it was the Germans who held the key to imperial trade, those precious metals of central Europe. There was a constant tension then between a Portuguese Crown hostile to the profit-seeking encroachments of those South German capitalists, and the need to establish a working commercial partnership. Such were these tensions, largely unresolved, that the Portuguese Crown turned repeatedly to its arch-competitors on the spice trade, the Venetians, with a view to releasing itself from the responsibility of marketing its winnings.

4.4. Negotiations with the Venetians for the relinquishment of the re-export trade.

In 1527, the Venetian Senate is thought to have proposed to Dom João III that they make a

⁵⁷ GAMPA BARROS, Stefan (2001) *Portugal and the European 2nd spice trade, 1480-1580* 6-119.

contract for all the pepper arriving in Lisbon except that destined for domestic consumption.⁵⁸ The original account of this remarkable episode in the history of the European spice trade appears in Gois' chronicle of Dom Manuel's reign, though the date is brought forward to 1522 and the whole tone of the passage seems intended to underline Venetian subservience.⁵⁹ Apparently, a Venetian general, Alexandro da Pesaro, leading five galleasses on the Flanders *mude*, was given written instructions (*comissam*) to stop in Lisbon to discuss the eventuality of a spice contract for the supply of the European market through the traditional mechanisms at Venice. The upshot was polite refusal, if accompanied by a show of great courtesy and, perhaps with some irony, even modest gifts of those very goods the Venetians had hoped to contract. Historians commenting on this episode have followed Gois in attributing it the symbolism of Venetian acceptance of 'un effettivo stato di inferiorità' in the face of clear-cut Portuguese trading supremacy, and interpreted the plan's rejection somewhat enigmatically as in line with the times ('porque a lei natural do progresso zombou. . do contracto').⁶⁰

There seems, however, to be another version of this episode, which reverses the roles and puts the Portuguese in the role of tendering European re-export to the Venetians. The date of the story is attributed to 1521, but is clearly trying to relate the same event. Moreover, the same proposal is understood from both camps to have been repeated on a number of occasions, and thus a date discrepancy is quite admissible.⁶¹ The source of this conflicting version of events would seem to be a reliable one - it has surfaced from the papers of the Council of Ten - and in it one finds reported that:

various deals have been proposed, and to our great advantage we have been asked to come and take spices

⁵⁸ BRAUDEL, *Mediterranée*. ., 423 (in original French edition vol. I, 567), and VAN DER WEE, *The Growth of the Antwerp Market*. ., 154.

⁵⁹ Chapter 81, 'De quomo hos Venezeanos mandaram çinquo galeaças ha çidade de Lisboa, & da commisam que ho Capitam dellas trazia', *Chronica do Rey Emanuel*, fol. 338 ff, Lisbon (Francisco Correia: 1566-67); republished as *Cronica do Felicissimo Rei D. Manuel*, ed. D. LOPEZ, Coimbra, 4 vols. (1949-54). Apparently, there is a further version of this episode in a parallel chronicle of the period by OSORIUS, *De rebus Emmanuelis*. ., 366.

⁶⁰ I. CERVELLI, 'Intorno alla decadenza di Venezia', *Nuova rivista storica*, L (Sept.-Dec. 1966), 599; Bento CARQUEJA, *O Capitalismo Moderno e as suas Origens em Portugal*, Porto (1908), 99.

⁶¹ GOIS suggests that the Venetians 'tentaram muitas vezes de fazer contratos com elRei Dom Emanuel', Holikowski Smith, Stefan (2001), *Portugal and the European spice trade, 1480-1580* ch. LXXXV pp22
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from Portugal. ..⁶²

Two further corroborating accounts of this episode elsewhere in primary sources are presented in the literature, one in the diary of Marino Sanudo and another in the *Report on the Old Records of the India Office*. Both of them, strangely, are interpreted in the line of historiography as stemming from the Venetians.⁶³ The first is patently misled by a misunderstanding of terms in a letter sent by the Venetians to the Portuguese King in 1519 and which talks of sending triremes to Africa as far as the ports of San Lucar and Seville, situated close to His Majesty's kingdom, so that it would be beneficial to the contracting of trade if those merchants came to Lisbon ('cum deliberaremus nuper alias mercatorias triremes ad Affricae oras destinare ad scalas usque Sibiliae vel Sancti Lucae regno Majestatis Vestrae satis propinquas, opere precium facere nobis visi sumus, in eo mercatoribus etiam nostris morem gerere, ut ad Ulixbonam quoque civitatem, si possent conferre ad commertia ibi contractanda).'⁶⁴ In this instance, *opere precium* has been taken to mean precious goods, and specifically spices, whereas the term is in fact used in its idiomatic context 'opere precium est', meaning 'it is worthwhile'. This letter would seem to be answered by the granting of specific privileges to the Venetians in 1522.⁶⁵

But even in principle, the Venetian accounts would appear to hold greater credibility than the Portuguese. Whatever the individual merits of the authors, the Portuguese chronicles are a dangerous historical tool, written as trumpeting panegyrics to the great deeds and heroics of the King's reign. They were officially commissioned and, even if produced posthumously, were often a means for their author to curry favour in court circles.⁶⁶ The Venetian accounts, by contrast, set down in official state records and personal diaries have a more persuasive

⁶² 'ne sonno sta' proposti vari partiti, et cum grande nostra utilità siamo invidadi et rechiesti a mandar a tuor [*tirar*] le specie in Portogallo [...]', Archivio di Stato di Venezia, Consiglio dei Dieci, Misti, reg. XXX, f. 49; published in ROMANINI, Samuele. *Storia documentata di Venezia*, Venezia: P. Naratovich, (1853-61), IV, 538.

⁶³ SANUTO, *I Diarii* .., tom. 29, cols. 337-8, presented by K.S. MATHEW, *Portuguese Trade with India in the Sixteenth Century*, New Delhi (1983), 207; *Report on the Old Records of the India Office*, London & Calcutta (1891), 174, as interpreted by Nicholas MIRKOVITCH, 'Ragusa and the Portuguese spice trade', #5, 176.

⁶⁴ 'Exemplum litterarum serenissimi Domini Venetiarum ad serenissimum regem Portugaliae', *I Diarii di Marino Sanuto*, tom. XXIX, col. 337.

⁶⁵ 'Carta de privilégio aos mercadores venezianos', A.N.T.T. Chancelaria Dom João III, liv. 1, fol. 2, published in the Apêndice Documental of M.V. Cotta do AMARAL, *Privilégios de mercadores estrangeiros* .., (1965).

⁶⁶ see the comments by Peter RUSSELL on the panegyric role of Portuguese chronicles in court society, 'Prince Henry the Navigator, in *Diamonds, Africa and the European spice trade, 1480-1580* Halikowski-Smith, Stefan, (2001), Portugal and the European spice trade, 1480-1580 European University Institute

claim to our trust. They square readily with other historical instances that we can vouch for. We know, for instance, from Il Cretico's secret report of June 1501, that the Portuguese King was keen from the very beginning to have the Venetian galleys come to load spices at Lisbon, and that overtures continued, as Priuli reports, until at least 1504. The idea was repeated, if as a natural consequence of Portuguese feats of arms rather than a professed wish for partnership, in a speech made by Afonso de Albuquerque on the departure of his fleet from Cochin for the seizure of Malacca in 1511. It was suggested that 'if we take this trade of Malacca away from them (the Moors), Cairo and Mecca will be entirely ruined and Venice receive no spiceries unless her merchants go and buy them in Portugal'.⁶⁷ The notion of partnership was more apparent in schemes initiated later in the century, between 1581-85, and again in 1598, this time on Philip II's instigation, and largely as part of the state policy of denying the restive Dutch and escaping the piracy and freebooting along the Atlantic, though these proposals were ultimately refused, as historically they always had been.⁶⁸

Other than the Portuguese chronicles, there is no reason to believe that the Venetian Senate ever seriously contemplated abandoning a lengthy tradition of trade with the eastern Mediterranean and the Levant to run to Lisbon as re-exporters for the Portuguese. As Priuli records in his diary in August, 1504:

it was a fact and continuously made clear to the Venetian authorities that he [the Portuguese King] was ready to concede any deal and give them these spices [. . .] Then, the city elders [. . .] who were very stubbornly of the opinion that this route to India couldn't last, and didn't want to abandon the customary and ancient routes to Syria for a new one and of which there was no experience [. . .], deliberated to pass this matter by. . .⁶⁹

The concern with the Portuguese incursion into the spice trade galvanised into the establishment of a committee or *zonta* of fifteen Venetian nobles of high esteem and experience known as the *Additio Specierum*, and later incorporated into the *Cinque Savi alla Mercanzia*. It advocated the seeking of *secretissimis remediis* through greater cooperation with the Mamluke sultan, and there was even talk of the construction of a Suez Canal, counter-propaganda and subversion, to the point of conniving with the Turk, Portugal's chief enemy

⁶⁷ cited in DANVERS, *The Portuguese in India*, London (1894), i, 226.

⁶⁸ see the Epilogue (§13) to this thesis for the details.

⁶⁹ 'havia facto et fazeva intendere continuamente al dominio veneto, che lui era presto farli ogni partito et darli queste spetie [..]. *Tamen* li sapienti padri [..], che ne erano molti indurati de opinione che questo viazo di l'India non potesse durare, et non volevano lassar li viazi soliti de la Soria et antiqui per prender un altro viazo novo et senza pratica [..]. deliberarono di soprastar a questa materia [..]'. PRIULI, *I Diarii*, II, 352.
Halikowski Smith, Stefan (2001). Portugal and the European spice trade, 1480-1580. European University Institute. DOI: 10.2870/92585

in the Indian Ocean, and ultimately price and duty cuts.⁷⁰ In light of this decision to continue unflinchingly with her traditional suppliers in the Levant, the Senate's rejection of their fellow citizen Sebastiano Cabot's twice proposed expedition in search of an alternative route to the Spiceries via a north-west passage appears immediately more understandable, in the same manner as Paolo Centurione's idea of a trans-Asian overland caravan route was promptly rebuffed.⁷¹ The argument that Venice prostrate itself before the Portuguese emerges only once, from the embassy of Francesco Teldi to Cairo in 1504, in which the abandonment of the traditional trading partnership with the Mamluke Sultan is presented as a threat to encourage him to take active steps to break the Portuguese monopoly through a naval showdown and thus facilitate the return of commerce to its *pristino corso*.⁷² But we should treat such threats with a pinch of salt; they were the stuff day-to-day politicking was made of, calculating rhetoric and blackmail rather than evidence of a genuine position.

The timing of the purported Venetian mission of 1527 would also appear a little suspicious, given the motivations implicated by the Portuguese version of events: 'tere-perdida ha speranza de has speçerrias virem da India a Baluto [Beirut], & Alexandria em tanto cantidade, quomo dantes vinham'. The nadir of shortages and interruptions on the Levantine trade route was apparently reached between 1517-18 when Rui Fernandes de Almeda reported the news that 'nobody has come apart from one cart from [the fair at] Chalon-sur-Saône. . . it's very little and the Venetians will lose hope' (*non vem nehuum que hua carocha que veo a Saona. . . he pouca cousa e os vnezeanos perderam sua esperança*).⁷³ Here, then, might have been an occasion to send a mission to Lisbon to negotiate some form of cooperation with respect to the spice trade. Instead, the official Venetian reaction evidently fought resolutely against any such notion. It responded by imposing a fearsome tax over

⁷⁰ F. LUCCHETTA, 'Relazioni dei Veneziani alle Notizie del Nouvo "Viaggio"', 413; R. FULIN, 'Il Canal di Suez e la Republica di Venezia', *Archivio Veneto*, t. I, 194-198; the commercial treaty of 31 March, 1507 between the Venetians and the Mamlukes is described by J. WANSBROUGH, 'A Mamluke Ambassador to Venice in 913/1507', *Bulletin of the School of Oriental and African Studies*, XXVI, p. III, pp. 521-524, London (1963). BARROS insinuates that the Venetians sought to subvert the Portuguese trading relationship with the rulers of Cochin and Cannanore by informing their emissaries, who were visiting Lisbon, of Portuguese military and conquest intent. *Ásia (Primeira Década)*, ed. BAIÃO, Coimbra (1932), 223-34.

⁷¹ RAMUSIO, *Navigazioni e Viaggi*. ., 962. Cabot's father had been refused in the period prior to the Portuguese discovery of the route to India.

⁷² The instructions for Teldi's mission are to be found in the papers of the *Consiglio di Dieci Misti*. Reg. XXX. fol. 49, and are published in Louis MAS-LATRIE, *Traité de paix et de commerce et documents divers concernant les relations des chrétiens avec les Arabes de l'Afrique Septentrionale au Moyen Age*, 2 vols., Paris (1866) and repr. New York (Burt Franklin: 1964), vol. 2, pp. 259-63.

⁷³ Halikonsky Smith, Stefan (2001). Portugal and the European spice trade 1480-1600. XVI, (1971), 71.

imports on these commodities from the *Ponente*.⁷⁴ By 1527, on the other hand, Labib reports that Venice was already enjoying a healthy *reprise*, and at least 51.8% of spice at the Lyon fairs in 1525-6 was of Levantine origin.⁷⁵

Thus it is that all the evidence would suggest, despite despondency and resignation in many quarters, that the Venetians were not prepared to give up their traditional commercial orientation. The *ripresa* of their Levant trade from around 1530 only seemed to confirm the sagacity of such a decision.⁷⁶ The Portuguese Crown, meanwhile, tetchy about the marketing exercise as a whole, and persisting with the muddled *bricolage* of a sales policy that we have been trying to describe in this section, flayed around for immediate salvation, someone to whisk the burden of re-export responsibilities out of its hands. Failing to convince the Venetians, and reluctant to continue on its own, the Crown chose to fall back ever more on private contractors.

4.5. The structures of re-export trade as embodied in the freight system.

To what extent did considerations towards domestic freight feature in Portuguese re-export policy? It is commonly assumed that only with the advent of mercantilist doctrine in the seventeenth century was concern for a vigorous merchant marine explicitly conjoined to that of a strong and healthy nation. But things had clearly moved this way even by the sixteenth century. In a memorandum drawn up by the States of Holland in 1535, the Emperor was warned of the specific consequences that might stem from the loss of northern Holland's seafaring trade as a result of the recent ban on grain export promulgated by the Regent, Mary of Hungary; he would no longer have at his disposal the four hundred ocean-going ships of Amsterdam, a fleet said to be more numerous than the combined fleets of England, France and Brittany.⁷⁷

One could convincingly argue that the rudiments of a national freight policy had been laid at the Cortes meetings at the end of the fifteenth century, in consequence to which, for example, the principle of precedence was established, that national ships be taken on before

⁷⁴ mentioned by Donald LACH, 'The Century of Discovery, vol. I of *Asia in the Making of Europe*, repr. (1993), 123.

⁷⁵ LABIB, S.Y., *Handelsgeschichte Ägyptens im Spätmittelalter (1171-1517)*, V.S.W.G., Beihefte, 46, Wiesbaden (1965), 228 and GASCON, 'Un siècle de commerce des épices à Lyon', *Annales E.S.C.* (1960), 664.

⁷⁶ F. BRAUDEL, *La Méditerranée* . . , vol. 2, 495 ff.

⁷⁷ J.D. TRACY, *Holland under Habsburg Rule: the formation of a body politic*, Berkeley: University of California Press (1990), 162.
Helikowski-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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foreigners for the carriage of cargo and freight, despite Oportan merchants' pleas that freight charges be standardised so as to prevent Portuguese shipmen from exploiting their privileged position by raising their tariffs.⁷⁸ On the whole, the Crown gently sought to support national freight, as we find in Tomé Lopes' efforts in 1502 to convince the Count of Nassau to authorise a provision facilitating the carriage of any kind of goods on Portuguese shipping from Flanders. Over the first decade of the sixteenth century, however, we find the King's position ever less forceful: in the unprecedented privilege granted the German commercial community in 1509, national freight policy appears to have been regulated by the stipulation that Portuguese nationals using foreign ships for export would pay a double rate of customs.⁷⁹ And then there is evidence that the Portuguese Crown itself exported on occasion in foreign vessels.⁸⁰ Express legislation was only enacted as far as shipping relations between metropole and Portuguese overseas territories were concerned, specifically Madeira, and even this seems gradually to have been circumvented.⁸¹ It is a reflection of the official disinterest as far as things European are concerned that so little overall policy for Portuguese freight operating European redistributive routes emerges; the King reacted to the merchant lobbies when and where an issue presented itself. In sum, it would have rather followed the logic of Portuguese policy in the sixteenth century that the strength of the nation be equated not with the merchant marine, but with a fleet of war directly under the King.

One can only point out the contrasts elsewhere in Europe. The English Crown had long promoted the English mercantile marine. The abolition of privileges accorded the Italian trading community was already promulgated during Edward's reign with a view to strengthening the 'Navie of the Realme', and royal vessels were on occasion lent out in support of English merchants' ambitions for Mediterranean voyages. And petitions to the Crown were quick to justify their requests with arguments such as: 'greate shipps and greater

⁷⁸ For the Cortes' resolutions, see GAMA BARROS, *História da Administração Pública em Portugal nos séculos XII-XV*, 2 edn. (1945-54), tome IX, 116-19. The *carta régia* of October 8, 1470, which stipulated that 'só em caso de não haver navios nacionais era permitido carregar nelas [em urcas, cocas e outras naus estrangeiros]', published in *Descobrimentos Portugueses*. ., II, 83. The Oportans complaints at the Cortes de Évora, 1481-2 and the King's reply: 'de tanto por tanto carregarem amte nas naões do Regno que nas estrangeiras' are in *ibid.*, II, 246 ff.

⁷⁹ Malines, 5 January 1502, A.N.T.T., C.F.P.A., caixa III, perg. no. 9, published in A.H.P., vol. VII (1909), 63, see privilege of 30 August, 1509, in DENUCÉ, *Privilèges commerciaux*. . .

⁸⁰ I. DÜRRER, *As Relações Económicas entre Portugal e a Liga Hanseatica*. ., (1953), 52.

⁸¹ see Holikowski with Stefer (2001), Portugal and the European spice trade, 1480-1580

number of maryners shalbe maintained then now is'.⁸² The Venetian Senate's reasons for sponsoring the Flanders galleys was an explicit adherence to the development and conservation of a merchant navy as much as stimulating trade beneficial to the city's citizens. The reasons given for the revival of the *muda* in 1584, at least as far as Spain and Portugal, specified both such concerns: 'for the conservation and enlargement in this way of the merchant navy, as for commerce generally, highly important and necessary things for our State' (*per la conservazione, et aumento così della marinarezza, come del negozio mercantile, cose tanto importanti et necessarie al stato nostro*).⁸³

It would be useful to begin by clarifying the commercial significance of freight operating between Lisbon and Antwerp. How much of the price mark-up between Lisbon and final sale can be ascribed to freight, and how much, then, brokerage costs and sheer speculative profits? We know that in November 1520, factor João Brandão freighted the 450 ton *Julia* for 325 cruzados.⁸⁴ Now, the Venetian merchant Alessandro Magno took a 540 ton *nave rotonda* to Egypt in 1561 with which he returned with a cargo of more than half a million pounds of spices, which would amount to at least 4,465 quintals. Private shipping sent to India was reckoned at a tonnage of 180-200, on which could be loaded around 2400 quintals of spices.⁸⁵ If we go by such parallels, a vessel like the *Julia* could easily have a capacity of up to 4500 quintals. But it would have been unthinkable to freight such a cargo for such a small sum as 325 cruzados. For a minute I thought this might refer to what the *Merchant's Avizo* calls 'carriage and barckage', that is the transport to and lading of the ship from the warehouse, or the trans-shipment. In 1607, the costs for such a transaction amounted to 90 *Res* for 6 quintals of pepper otherwise worth 124,800 *Res*. These cost proportions are more reasonable.⁸⁶

Donald Lach, following an independent line of enquiry, has calculated from certain contracts that freight between Lisbon and Antwerp was worth 2 $\frac{2}{3}$ ducats per hundredweight

⁸² British Library (Museum), London. Cotton, Nero, B. I, 'Whether it be proffitable..', fol. 19.

⁸³ I. CERVELLI, 'Intorno alla decadenza di Venezia', *Nuova rivista storica*, L (Sept.-Dec. 1966), 600 referring to Archivio di Stato, Venezia, Senato Secreta, Deliberazioni, Registro 84, c. 81.

⁸⁴ letter from João Brandão (Yoam Brandam), Antwerp, 1 November 1510, from C.C., p. 3a, m. 4, d. 40.

⁸⁵ cited in LUZZATTO, 'La Decadenza di Venezia dopo le scoperte geografiche nella tradizione e nella realtà', Archivio Veneto, serie 5, no. LIV, (1954), 169-70 and 'Driffas von Kaufmannschaft. von 1514/5', paragraph 197 in MÜLLER, *Welthandelsbräuche*. ... State vessels were capable of carrying between 7500 to 8000 quintals in the 1520s, *Cartas de Affonso de Albuquerque*, tom. I, 83.

⁸⁶ *The Merchants Avizo. Verie Necessarye for their sons and Seruants, when they first send them beyond the Seas, as to Spaine and Portingale, or other Countries*, (1607), 38-40.
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on spices. It might be instructive to compare this with freight costs on the Carreira da India. The Lopez and Barreira contract of 1579 stipulates the freight of cloves at a cost of 2\$400 reis/quintal (i.e. around 6 ducats/qu.).⁸⁷ De Silva maintains that the figure for cinnamon was a little over 10 cruzados at the time of the 1570 Regimento (perhaps inclusive of freight charges between Colombo and Goa), whereas Godinho calculated Indies freight for pepper around the middle of the century at 4 cruzados/quintal.⁸⁸ So, it was not even twice as expensive to ship pepper right the way around the Cape of Good Hope as it was to ship it from Lisbon to Flanders. Such a calculation evidently puts strain on the price ladders established in Chapter 7 in which the costs of transport were taken as a variable contingent upon distance travelled.

There remains one final source for approximating freight costs. Freight was also calculated as a proportion of the value of the commodities themselves. On this tack, Meder instructs us that the freight of pepper was worth 10-10.5% of the consignment, and that of the other spices around 11%.⁸⁹ This sounds entirely reasonable, between 5%, which was the expense of sending hops from the Netherlands to England, and 25%, which was how much was set aside for a journey between Antwerp and Madeira. Thus, the *Julia* could have been laden with a total cargo of 147 quintals (assuming the contract sales price in Lisbon of 22 cruzados/quintal). A negligible cargo, an unlikely possibility, even if we are to accept the most generous of risk spreading strategies. The *Julia*, it seems, was freighted for the transportation of some low value, bulk commodity and, as we have to conclude, freight costs were not in the last instance calculated per vessel or according to capacity made available, but as a proportion either of the value or the weight of the commodity transported.

Maritime insurance.

Maritime insurance may yield leads for further enquiry into the organisation of trade along the Lisbon-Antwerp route and technicalities such as the values of cargoes and the breakdown of profits. That said, it is difficult to establish what the precise arrangements were. Repeated claims for compensation from losses from piracy were addressed to the relevant

⁸⁷ from J. GENTIL DA SILVA, 'Contratos da trazida de drogas no seculo XVI. Subsídios e documentos', (sep.) in *Revista da Faculdade de Letras de Lisboa*, tom XV, 2a serie (1949).

⁸⁸ C.R. de SILVA, 'The Portuguese Impact on the Production and Trade in Sri Lankan Cinnamon in Asia in the Sixteenth and Seventeenth Centuries', *Indica*. (1989), 33.

⁸⁹ Lorenz MEDER, *Handelsbuch*, Nürnberg (1557), re-published as *Das Meder'sche Handelsbuch und die Welser'schen Nachrichten*, ed. H. (2011), Portugalia, Wiesbaden (1974), pp. 106-107.
Halikowski-Smith, Stefan (2011), Portugalia, Wiesbaden (1974), pp. 106-107
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governments held responsible for the deprivations of their wayward subjects. This would suggest that no comprehensive insurance cover yet operated on private freight plying this route. The Antwerp factor admitted on one occasion that the value of one cargo (822 marcs of silver, once minted 4685 cruzados according to the monetary standards established in 1489) was such that maritime insurance could not be found.⁹⁰ And yet we know that Florentine companies represented in Lisbon from the second half of the fifteenth century played an important role in the Portuguese economy, not only as bankers but equally as maritime insurers.⁹¹ Even more so the cities of Antwerp and Bruges, which, during the first half of the sixteenth century were not only at the centre of the European maritime insurance industry, but helped widen its application across the commercial sphere.⁹² And many of the juridical and collective moral objections to maritime insurance that had hamstrung this practice were set right in an important treatise on the subject written by Pedro Santarém and published in Venice in 1552 and which, drawing on the Italian tradition, set out to distinguish such contracts from usury and which had rendered them damnable hitherto according to canonical law.

In the case of the spice shipments to Antwerp, Lorenz Meder's *Handelsbuch* urges its readers to ensure that the Portuguese King insured their goods as far as Flanders, for which, together with freight, a payment of 4-6 ducats was levied per hundredweight.⁹³ But our sources confirm that a private market for insurance operated equally. The Portuguese factor Rui Fernandes himself contributed 15 libras to a total fund of 1883 libras, split between 42 separate insurers, for the *Schwan*, which was to sail between Lübeck and Arnemuyden in 1531.⁹⁴ The Lucchese business community in Antwerp stood as surety for the misfortunate *Saint Anthoine* and the *Miséricorde*, which were shipwrecked with their cargo of *pastel*,

⁹⁰ A.H.P., vol. VI, 394.

⁹¹ Federigo MELIS, 'Di alcune figure di operatori economici fiorentini attivi nel Portogallo, nel XV secolo', in *Fremde Kaufleute auf der Iberischen Halbinsel*, hrsg. Hermann Kellenbenz, Köln - Wien (Böhlau Verlag: 1970).

⁹² VAN DER WEE, *Antwerp Market*, 327 and #97; EHRENBERG, *Zeitalter der Fugger* . ., trans. as *Capital and Finance in the Age of the Renaissance*, New York (1928), 236. See WYFFELS, *Zeeverzekeringsspolis* . ., 95-103, VERLINDEN, *Codigo* . ., 146 ss. and H. LAPEYRE, *Une famille de marchands: les Ruiz. Contribution à l'étude du commerce entre la France et l'Espagne au temps de Philippe II*, Paris: Colin, (1955) for more information on this subject.

⁹³ MEDER, (c) 'Die Lissaboner Handlung', 28. If, as Lach has calculated, freight amounted to 2 $\frac{2}{3}$ ducats per quintal, another 2 was levied for maritime insurance and, in the case of cinnamon or cloves, 4 ducats per quintal.

probably of Toulouse.⁹⁵ Another source suggests that at least fifty insurers signed a petition protesting at the levels of risk and procedural difficulties in the recovery of stolen cargoes in 1546. Such turbulence within the profession may well have been the cause for the proposal, despite vigorous opposition, for sworn-in insurance brokers at the beginning of Philip II's reign.⁹⁶ Whether this proposal was ever acted upon we don't know for sure, but from an official declaration of losses made to the Antwerp authorities by Spanish merchants in 1567, it seems that there was a standard procedure in place for dealing with insurance compensation claims. This is my conclusion from reference to a certain 'Juan de barlaymont', described as 'notable here as a person well-versed in such business, namely to make [declare] ships' damages in Spanish' (*notario daqui como persona entendida en semelantes cosas y negocios para hazer las dhas averias en lengua espanola*).⁹⁷

State fleets.

As we have seen from the *ciclos de negocio* in section 3.5., lack of market clearance by private freight seems to have necessitated the intervention of state fleets, though available evidence would suggest that these *armadas* were only put to sail somewhat sporadically and on the King's orders. State fleets, akin to the Venetian, not only escorted private freight, but carried the King's commercial share of the product, until 1505 taken in the form of duties, and thereafter the surplus left over from on-going contracts. State fleets, then, were to see principally to the servicing of the Crown Feitoria with the King's spices. But did they not only escort, but actively transport third parties' spices? We have one indication that they did, from Meder, though the personal pronouns are a little confusing - 'be sure that the King insures the goods in his ship up to Flanders' (*achten, daß der König ihm die Ware in seinem Schiff bis nach Flandern versicherte*). This would appear to be confirmed by the author's next piece of advice, namely that on receipt of goods in Antwerp one could ask between 3-5% interest.

That we have so little information on the state fleets to Flanders is one of the great shortfalls in our source material; most patently when one contrasts this state of affairs to the meticulous records of outgoing vessels on the *Carreira da India*, whose individual portaits

⁹⁵ Renzo SABBATINI, '*Cercar esca*'. *Mercanti lucchesi ad Anversa nel Cinquecento*, Firenze: Salimbeni (1985), 59.

⁹⁶ *Bulletin de la Societé de Géographie d'Anvers*, 215.

⁹⁷ C.F.P.A., ex. 4, m. 5 no. 2 (2001), Portugal and the European spice trade, 1480-1580
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adorned the walls of the viceregal palace in Goa alongside their service histories.⁹⁸ A large question mark, for instance, hangs over the frequency with which state fleets were despatched for Flanders. Florence de Roover, using the van der Molen letters, has suggested that the fleet usually arrived twice a year, in May, June or July and again in December.⁹⁹ No other source would confirm this; indeed, we only have sure record of a handful of fleets ever having sailed, and strong hints that these fleets were never regularised with readily anticipated dates of arrival etc.¹⁰⁰ We know that between December 1537 and March 1538 a state fleet arrived in Antwerp under the command of *capitão-mor* António de Miranda. The armada was recorded as carrying the King's spices.¹⁰¹ The next fleet, of June 1538, is exceptionally well documented: it unloaded 25.095 quintals of spices, including 2.913 quintals of pepper, 723 quintals of ginger, 709 quintals of clove, 434 of cinnamon, 211 of nutmeg and 105 of mace. The spices were carried by 130 ships. This must be the armada that the Spanish ambassador in Lisbon, Luis Sarmiento, witnessed sailing up the Tejo with a cargo of between 20 - 30.000 quintals of spices.¹⁰² The van der Molen letters report a fleet arrival of December, 1539, but the next one came only in May, 1544.¹⁰³ Then, from a different source, we have record of a fleet of 1552, in which three *naus* were lost, the *Espera*, whose commander (*capitão-mór*) was Pedro Afonso de Aguiar, alongside another commanded by Anrique de Meneses, and a third, apparently from Aveiro, under Simão Guedes and João Jorze. The fleet seems to have included some 'freeriders', which went as *urcas*.¹⁰⁴

⁹⁸ *The Voyage of F. Pyrard de Laval*, ed. Albert GRAY & H.C.P. BELL, Hakluyt 1st series, vol. 77, London (1878), 50.

⁹⁹ Florence EDLER-DE ROOVER, 'The Market for Spices in Antwerp, 1538-1544', *Revue Belge de Philologie et d'Histoire* (1938), pp. 212-21.

¹⁰⁰ see GODINHO, *Ensaio*, (1978), vol. II.

¹⁰¹ 'Estatística da Carga e dos Barcos Portugueses Entrados com Avarias no Porto de Antuérpia', de 1535 a 1551, taken from Livro no. 209, Feitoria de Flandres and published by V. RAU, Apêndice H, p. I, *Exploração e Comércio*. (1951). The reason for these seven ships' inclusion in the rolls of the Feitoria's ship damages is unclear. Was the King seeking recourse to the collective reparation funds set aside by the Portuguese trading community in Antwerp?

¹⁰² cited by MAGALHÃES GODINHO, *Os Descobrimentos*., ed. Arcádia (1963-65), II, 228.

¹⁰³ F. EDLER, 'The market for spices in Antwerp, 1538-44', 214 from Insolvente Boedelskamer, no. 2030: Pieter van der Molen, Brievenkopij (1538-1544), fol. 186v, Municipal Archives, Antwerp.

¹⁰⁴ The fleet is mentioned in the *Relação de naus que se perderam indo pera Frandes com carga de especiaria*, SOUSA, *Annaes de El Rei Dom João Terceiro*, Lisbon (1951), 292, and may well be that alluded to in a two-page letter by Sir John Masone to the English State Council, written from Brussels and dated June 1 (?): 'The Portuguese fleet of 20 sail arrived at Antwerp four days ago, laden with spices and other merchandise, besides it is said a good quantity of money'. Calendar of State Papers, Foreign 1553-58, 173 [see ficha]



How were these royal fleets put together? Were they exclusively vessels of state, and did they not include some ships chartered privately by the Crown, as was the case for some of the early voyages of discovery like that of Cadamosto? For it is evident that on occasion, even frequently the Antwerp feitor recurred to private shipping; he sent 822 marks and 2 ounces of silver to Lisbon with two ships that left Antwerp on 14 February, 1515, sending the rest on, some remaining 171 marks, in May.¹⁰⁵ The King was evidently constrained to do the same from the Lisbon end; in May 1513 he ordered the feitor of the Casa da India to send 3500 quintals of pepper to Flanders in his *náu* the *Belém* alongside that of Tomé Lopes, having already sent 500 quintals in advance with the *nau* of André Afonso and whose profits were to go towards the construction of the Jeronimos cathedral in Belem.¹⁰⁶ According to the damage rolls, six private ships sailed into Antwerp at the end of May 1544 loaded with, amongst other goods, the King's spices.¹⁰⁷ Could this be the same fleet that the van der Molen letters refer us to? Private shipping, we must conclude, acted as a supplement to the existing fleets of state built *naus* in furnishing the Crown Feitoria, for it is well known that the Crown suffered tight constraints on its own shipping. And, as we shall see in section 12.4., the Portuguese Crown did not always even call upon domestic freight to service imperial flows.

There are further uncertainties that ought well to be resolved: are we to believe that there was a royal fleet specifically laid on for the Antwerp Feitoria, or are these *naus* the same *naus* that plied the Carreira das Indias? The *Cirne*, for example, named in the Antwerp roll of ships damages for 1537-38; are we to believe that she was the same *Cirne* that had been the flagship of the Chief Captain in 1510? Most improbably, for the record for ship longevity is conventionally accorded the Chagas de Cristo, which completed eight round trips on the Carreira da India and was reduced to a hulk after 26 years of service. *Naus* typically

1559, 79v - from Jean DENUCÉ, *Inventaire des Affaitati, banquiers italiens à Anvers de l'année 1568*, Antwerp: de Sikkel, (1934), 56). Are we to assume it was brought by the state fleet or, given the fact that the arising complaint was addressed to the Antwerp authorities, are we to infer that the goods were privately contracted by a Flemish freight concern?

¹⁰⁵ GODINHO, *L'économie de l'Empire Portugais*. . (1969), 460. On another occasion, in November 1520, factor João Brandão freighted the 450 ton *Julia* for 325 cruzados, FREIRE, *Notícias da Feitoria de Flandres*, 226, #3.

¹⁰⁶ A.N.T.T., *Corpo Cronológico*, I, 12, 16.

¹⁰⁷ Table IV, *Estatística da carga e dos barcos portugueses entrados com avarias no porto de Antuérpia, de 1535 a 1551, 28 - 30 May 1544.*, in RAU, *A Exploração e o Comércio do Sal de Setúbal*, Lisbon (1951), Apêndice B, p. 1, (1951).
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made only four return trips in their lifetime.¹⁰⁸ There is documentary evidence of a further *Cirne*, however, one that Dom Manuel had consigned to the protection of the Venetian Doge in September 1498, and loaded with sugar. These last two could conceivably fall within the longevity of a single ship's life, and we have no firm evidence for this period that *naus de India* were structurally any different to those operating in European waters.

It might, of course, be that *Cirne* was simply a popular ship's name at the time. There are other discrepancies. The portage of a state *nau* on the Indies run appears somewhat at odds with our records of the quantities brought to Antwerp, the former commonly transporting between 6000 and 8000 quintals and often as much as 15.000, later in the century, in the era of the *supergigantes*, between 20-30.000 quintals at a time.¹⁰⁹ But this might ultimately be little more than a function of the sizeable discrepancy between the average value of spice cargo transported on the Lisbon-Antwerp leg (60.000 cruzados' worth) and the cargoes hauled back to Portugal from India (250.000 cruzados), which in turn may have more to do with the predominant forms of trade.¹¹⁰ Did contract trade dispose of the rest? Or are we to believe, from the number of ships constituting the Flanders fleet of June 1538, that the cargoes were split into smaller consignments so as to spread the risk?

And how can we explain an apparent anomaly between the closure of the Feitoria and the continued service of royal fleets, such as in 1552? This anomaly suggests that the Crown fleets were either delivering according to contracts previously agreed or else using a direct sales mechanism that no longer necessitated the intercession of a royally appointed factor. In any case, the rapid development of sub-contracting and the inevitable quantities of spices from concessions on the Asian run freely circulating at Lisbon and other major Portuguese ports meant that trans-shipment of these spices was once again to a large degree the business of the free market.

Private commercial freight.

¹⁰⁸ GRAY BIRCH, *The Commentaries of the Great Afonso de Albuquerque, by his son*, ch. VI, 24 and vol. II, lxxv, footnote #1, London (Hakluyt Society, 1875-84); T. BENTLEY DUNCAN, 'Navigation between Portugal and Asia in the Sixteenth and Seventeenth Centuries', in E.J. VAN KLEY & C.K. PULLAPILLY eds., *Asia and the West: Encounters and Exchanges from the Age of Explorations*, Notre Dame (1981), 8. Might any of the other *naus* named in the roll of ships damages, the *Capitânia*, the *S. Lázaro*, *Cirne*, *Trindade*, *Fiéis de Deus*, *S. Paulo* and *Esperança*, have seen service on the *Carreira das Índias*?

¹⁰⁹ GODINHO, *Os Descobrimentos e a Economia Mundial*, Arcádia ed. (1963-5), II, 71 ff.

¹¹⁰ calculated as an average from from the list of shipping losses due to shipwrecks, 'Relação de *naus que se perderam no caminho da Índia*', in Frei Luís de SOUSA, *Anais de João III*, suplemento, t. II, pp. 291-2. See Halikowski Smith, Stefan (2001), *Portugal and the European spice trade, 1480-1580*
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This 'free' market for freight operating between Lisbon and Antwerp deserves to be described in all its colour: the traffic of northern Europe alongside Portuguese ships not only from Lisbon, but Madeira, Porto, the Algarve, Setúbal and many other lesser ports of the Kingdom. If we are to venture some quantitative calculations from the statistics of shipping losses presented by João III to the French court in 1534, Portuguese private freight constituted at least fifty times that of the royal fleet.¹¹¹ Cargoes were typically as mixed as the ships' provenance, with goods representative of all three *ciclos de negocio*; fine spices were always spread out thinly amongst heavier and less valuable goods, most commonly wine, cork or salt, so as not to exaggerate the cost of possible losses.¹¹² The ships themselves were of all sorts judging from the Antwerp damage rolls: *urcas*, that were probably the two-masted Dutch fishing vessels with a blunt bow known in English as doggers, carracks (*naos*), caravels (*caravelas*), even galleons (*galeões*). Kilian has established for the mid-fifteenth century that the mean tonnage of Portuguese shipping sailing up the Zwin was 150 *last*, although the majority a hundred years later rarely exceeded 60 *last* (110 tons). Others could hold as much as 225 *last* (450 tons).¹¹³ The time it took to make a straight journey between Lisbon and Antwerp depended to a certain degree on the type of ship. The swifter caravels were known to sail up to a hundred miles a day off the coast of Africa. Adam of Bremen's *Itinerário* suggests that the thousand mile run down to Lisbon from Flanders could be accomplished in nine days, inclusive of stops in English ports, but fully loaded one might expect an *urca* to take fifteen days, and as much as twenty-two days.¹¹⁴

A few of these ships would have sailed beyond Antwerp, affording only a short stop there, heading then for the growing ports of Zeeland and one or two even the distant Baltic.¹¹⁵ Others would only arrive at Antwerp after a long journey of coastal *cabotage*,

¹¹¹ Frei Luís de SOUSA, *Anais de D. João III*: suplemento, R. LAPA ed., t. II, 237. I have commented on the validity of this figure in §73, 'Losses of Portuguese freight to shipwreck and sea-borne piracy'.

¹¹² 'Estatística da Carga e dos Barcos Portugueses Entrados com Avarias no Porto de Antuérpia', de 1535 a 1551, taken from Livro no. 209, Feitoria de Flandres and published by V. RAU, Apêndice H, *Exploração e Comércio..* (1951).

¹¹³ KILIAN, *Die Handelsbeziehungen der Hansestädte zu den Völkern der iberischen Halbinsel vom 13 - 16 Jahrhundert*, typed dissertation, Leipzig (1922), cited by A.H. de OLIVEIRA MARQUES, *Navegação Prussiana para Portugal nos princípios do século XV*, separata da Revista da Universidade de Coimbra, vol. 19, (1960), 5.

¹¹⁴ J.A. GORIS, *Etudes sur les colonies marchandes*, 155 and V.M. GODINHO, *Les découvertes. XVe-XVIe, une révolution des mentalités*, Paris (1990), 29-30.

¹¹⁵ Ever less common from the second half of the fifteenth century, direct voyages to the Baltic seem to have been undertaken predominantly by Hanseatic shipping, which suffered a certain demise from around this time. DOLLINGER, *La Hanse XIII - XVIIe*. Paris (1964), 317 etc. can trace only one ship from Portugal in the port of Danzig between 1460-1500. Traffic between Portugal and the Baltic was increasingly trans-shipped at
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though, in truth, it would seem that most of the stop-overs by Portuguese shipping were made on the route back to Lisbon. Wheat was loaded in Brittany in 1438, 1439, 1440 and 1445. Some of this cargo, despite the endemic shortages back in Portugal, may have been dropped off again in other ports along the French Atlantic such as Bayonne, where we learn that corn was regularly delivered.¹¹⁶ Another convoy of 1513 sailing back to Lisbon was required to make two stops, at La Rochelle and Bordeaux, to drop off a consignment of *laken* (sheets) and *worsetten* (worsted).¹¹⁷ Portuguese merchants have otherwise been recorded at Tréport, Calais and Brest from 1344, and Abbeville in 1362, alongside a number of larger French ports where traces of Portuguese trade go back a lot further still, such as at Bordeaux.¹¹⁸ Given, then, the ubiquity of Portuguese coastal trading up the Atlantic to Flanders, Jean Ango's embargo of April 1531 on Portuguese shipping entering French ports on the route to Flanders must have been a real setback to private commercial shipping; it is for this reason, then, that the Portuguese Crown lobbied so hard for the French King to release a letter of patent allowing Portuguese ships to enter French ports on the condition of maintaining strict neutrality.¹¹⁹

And Portuguese freight would have had to take its side next to shipping from elsewhere for, as we have seen, it was accorded no special privileges. Competition was fierce already in the the mid-fifteenth century, if we are to judge from Fernão Lopes' description of the multitude of foreign shipping (*de desvairadas partes*) sailing up the Tagus to pick up cargoes of salt and wine.¹²⁰ In part, these were the sizeable fleets of Flemish *urcas* which came to load salt at Setúbal and subsequently sailed on to Gibraltar and other Spanish ports, if we are to go by a fourteenth century route-book held in the Commerzbibliothek of

Antwerp and later, Amsterdam. A.H. OLIVEIRA MARQUES, 'Navegação Prussiana para Portugal nos princípios do século XV', separata da *Revista da Universidade de Coimbra*, vol. 19.

¹¹⁶ *Arquivo Historico Portuguez*, vol. II, 189, 190, 198, 271; GRAMULLA, *Handelsbeziehungen Kölner Kaufleute zwischen 1500 und 1650*, Köln-Vienna (1972), 337.

¹¹⁷ see R. DOEHAERD, *Etudes Anversoises*. ., #2598. Coastal *cabotage* is pointedly lacking in the map of Europe illustrating the principal trade routes to and from Antwerp compiled by V. Vazquez de Prada, *Lettres marchandes d'Anvers*, I, 35. For confirmation of stops on the Lisbon to Antwerp run, check the routing of the Hanseatic salt convoys.

¹¹⁸ GENTIL DA SILVA, *L'appel aux capitaux étrangers*, 344, #4.

¹¹⁹ Ango's embargo is covered by GUÉNIN, *Ango et ses pilotes*, Paris (1901), 90; the letter patent was obtained in Lyon, August 17, 1536, C.F.P.A., cx. 3, no. 6 - m. A, no. 4.

¹²⁰ Fernão LOPES, 'Prólogo' to the *Crónica de D. Fernando*, ed. Torquato de Sousa Soares, Lisbon: Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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Hamburg.¹²¹ These visits were catalysed by the ever more apparent shortfall in Mediterranean cereal production and the region's consequent recurrence to supplies from northern Europe, commonly acknowledged as one of the determining currents of sixteenth century European trade, provoked a veritable 'invasion' of northern shipping into the Mediterranean.¹²² Between 1537-47, the Hollanders' carrying trade increased ten-fold. It is to be conjectured how much of this shipping was sent south to Portugal. And the Dutch, if perhaps the most impressive, weren't the only ones to profit from this situation: numerous vessels from northern France and Brittany are recorded as making for Lisbon laden with cereals and cloth.¹²³

Apart from the Dutch, Portuguese ports had been traditionally graced by the fleet of the north German Hansa, which alone received 18 *cartas régias* of privilege from the Portuguese Crown between 1503-55. Hanseatic shipping doesn't figure much in the anchorage lists of foreign ships in Arnemuyden before the end of the 1530s, but then the Hansa *Kontor* had decided not to abandon Bruges. Once they had unloaded their heavy cargoes of wood, tar and other construction materials, these ships traditionally took wines, oil, figs, grapes and sugar back north with them. Spices too, as we find carried under commission from the Fugger (*Focker*) in the boat of Gerard Tappe of Reval in 1513, or in the *Santa Anna* belonging to Johann Schacht of Danzig.¹²⁴

Finally, we need perhaps mention Spanish shipping. For there is evidence that ships sailed from the Canaries under Spanish captains and crews carrying a principal cargo of sugar, but that stopped at Lisbon on their way up to Antwerp where they most probably loaded up the other goods registered in their cargo, 'espeçerias y de otras mercaderias'.¹²⁵ An ideal arrangement for a contractor like the Affaitati, who dealt in both commodities and would

¹²¹ W. ENGELBRECHT, 'Esboço das relações históricas entre Portugal e a Holanda', (1949), 412.

¹²² BRAUDEL, *The Mediterranean World...*, 2nd rev. ed. in English trans (1974), 543 and Part Two, III, §2 'Equilibrium and Crisis in the Mediterranean Grain Trade'.

¹²³ M. MOLLAT, *Le commerce maritime normand à la fin du Moyen Age*, Paris (1952), especially 234-35; H. TOUCHARD, *Le commerce maritime breton à la fin du moyen age*, Annales littéraires de l'Université de Nantes (1967).

¹²⁴ R. DOEHAERD, *Etudes Anversoises...* (1963), vol. III, doc. 3642 & DÜRRER, *As Relações Económicas entre Portugal e a Liga Hanseática desde os últimos anos do século XIV até 1640*, Dissertação, Universidade de Coimbra (1953), 52. Also F. BRAUDEL, *The Mediterranean...* (1972), Part Two, III, 3, ii. 'The arrival of the Hansards and the Dutch', 629-. The definitive study of the Hansa seems still to be considered T. LINDNER, *Die deutsche Hanse: ihre Geschichte*, Leipzig (1911).

¹²⁵ A. N. H. J. C. P. A. Ex. 4, II, 5, no. 2. Hajikowski Smith, Stefan, (2001), Portugal and the European spice trade, 1480-1580 European University Institute

transport them to the entrepot of the North.¹²⁶

Ultimately, it remains to be seen how Portuguese shipping fared alongside this fierce competition. Could it retain favour with the consortiums of large-scale contractors to whom the spices belonged? In the long term Portuguese freight withered, but I have left this issue for the final and analytical section of the thesis (Part IV). Here I have wanted simply to expose the configurations of the freight that would have carried Portuguese spices up to Antwerp so as to serve as a backdrop for the ensuing discussion of the shifting interests involved in control of spice re-exports.

4.6. Active Portuguese trade beyond Antwerp.

No concerted efforts were made by the Portuguese, at least not publically, to create their own distributive networks beyond the staple at Antwerp, even if Portuguese *procuradores* were occasionally sent as far afield as Reval, on the Livonian coast. To be fair, there is a letter of privilege dated January 23, 1532, according Portuguese shipping commercial exemptions in German ports by the Empress of the Holy Roman Empire D. Isabel, but this may well have been little more than a reciprocal gesture to the more extensive privileges that João III had confirmed four years earlier.¹²⁷ Only in the brief period preceding the first sales contracts, in which spices were still freely traded, do we have notice of one Tristam Gomes, a Portuguese merchant, who declared in Antwerp that he had sent 41 bales of pepper (164 quintals) on to England, only for them to be sequestered there. Apparently they were suspected of belonging to the Genoese: Portuguese merchants were clearly still much of a rarity in that part of the world.¹²⁸ This is the only Portuguese trading enterprise in spices beyond Antwerp that I have come across and that is worth relating until the emigration of a part of the Portuguese community to Cologne, initially in 1566, and then more significantly in 1578. Spices probably constituted the principal trade the Portuguese brought with them from Antwerp to Cologne, to the point that it caused considerable friction with the city's own merchants and their trade.¹²⁹ The large and successful firms of Fernando

¹²⁶ A.N.T.T., C.F.P.A., cx. 4, m. 5, no. 2 & 14.

¹²⁷ A.N.T.T., Corp. Cron. p. 2, m. 173, doc. 79.

¹²⁸ 21 August, 1505, *Certificats 1505-1510*, f. 376r, published as #1333 in *Etudes Anversoises. Documents sur le commerce international à Anvers, 1488-1514*, ed. R. Dochaerd, 192.

¹²⁹ THIMME, 'Der Handel Kölns am ende des XVI Jahrhunderts', in *Westdeutsche Zeitschrift für Geschichte und Kunst*, t. XXXI (1912), 405 ff.; G. FISCHER, *Aus zwei Jahrhunderten Leipziger Handelsgeschichte, 1470-1650*, Leipzig (1929), 217. Portugal and the European spice trade, 1480-1580.
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Ximenes and Nikolaus and Simon Rodriguez henceforth exported directly to Frankfurt on Main, Leipzig, Nuremberg and Strasbourg. Re-export of spices to England, valued at £8,383 in 1574, seems to have been wholly passed over; at a census of 4.632 foreign nationals residing in England in 1571, only seven were registered as Portuguese.¹³⁰ Attendance statistics at the Lyon fair the same year tell the same story; only four Portuguese participated as against 22 Germans and 154 Italians.¹³¹

But for the period which more directly interests us, the spice trade was handed down after various deals to the rich tradesmen of the Rhine and southern Germany, who had established themselves in Antwerp and were the indispensable distributors of the vast and promising markets of central Europe. We are about to investigate their trade. As the one-off attempt by the Merchant Adventurers to sell their cloths at the Frankfurt fair of September 1564 revealed, the harshest of toll systems in Europe rendered the whole enterprise of European distribution down the Rhine thoroughly unprofitable for foreign parties.¹³² Beyond the confusing grabs made for the spice trade by the multifarious consortiums of merchant capitalists ranged against the Portuguese Crown, at the level of physical movement Portuguese suppliers and German redistributors continued to meet at Antwerp, which we would be tempted to describe as central-place trading in August Lösch's terminology.¹³³

4.7. 'Capitalism and Dividing up the World': to what extent was Antwerp the exclusive distributive market of Portuguese spices over the first half of the sixteenth century?

Given the manifold configurations of re-distributive freight that we have just outlined, the question that once again rears its head is how it could be that Antwerp ever accorded itself, as historiography is keen to have us understand, an exclusive re-distribution post for Portuguese spices. Materné is happy to announce that frequently as little as 10-25% of Portuguese pepper from Asia arrived at Antwerp - though I think what he means by this is

zu leiden'.

¹³⁰ *Elizabethan Domestic State Papers*, MSS LXXXII.

¹³¹ Frédéric MAURO, 'Merchant Communities, 1350-1750', in J.D. TRACY, *The Rise of Merchant Empires*, (1990-1), vol. I, 264.

¹³² Douglas R. BISSON, *The Merchant Adventurers and the Tudor Commonwealth: The Formulation of a Trade Policy, 1485-1565*, Ohio State University PhD, microfilm by University Microfilms International, Michigan (1989), 193; more specifically, Fitzwilliams' letter of 30 November in DE LETTENHOVE, *Relations des Pays-Bas et de l'Angleterre sous le règne de Philippe II*, Brussels (1882-1900), IV, 115-16.

¹³³ Halikowski-Smith, Stefan (2001). Portugal and the European spice trade, 1500-1580. *August LÖSCH, The Economics of Location*, trans. New Haven (1954). European University Institute

the Crown Feitoria there - for, as I shall try to argue in this concluding section, private trade was as much a prisoner of nodal markets as the King's trade we investigated in section 4.1.¹³⁴

We cannot ignore, however, Gascon's work on the Lyon market, which has suggested that quantities of Portuguese spices were flowing in sporadically from the French Atlantic ports. If the volume arriving from Nantes was small, 14 *balles* or 0.86% of the market-share at the Lyon fairs of 1525-6, 149 *balles* were recorded from Bayonne in 1533-34 and a further six from Limoges, most probably forwarded from La Rochelle. Atlantic spices thus grew to constitute 14.95% of the market share. Their share fell into insignificance, however, with the royal censure of 1540 and concerted efforts to stimulate French trade with the Levant.¹³⁵

Independent studies of trade through French Atlantic ports in this period would seem to confirm that, if there is the occasional reference to Portuguese spices, they were quite clearly not the object of re-export.¹³⁶

It is not clear how the Spanish market was supplied with Portuguese spices, as is at least attested in the *Memoria de las Mercaderías que entran en el Reyno*. . from the mid-sixteenth century.¹³⁷ It is well known how little commercial traffic moved over the mountainous wastes that separate Portugal from Castile. It would seem reasonable to suggest, then, that the market at Burgos, described as the most important centre of distribution of internal trade, was supplied by Portuguese fleets which, on their way up to Flanders, stopped off along the Cantabrian coastline in the same way that they called in at various ports along the French Atlantic coast, taking on in exchange, as the Lomellini did in the fifteenth century, cargoes of Castilian corn.¹³⁸

A clear way of determining the degree of Antwerp's exclusiveness as point of European redistribution of Portuguese spices would be to square the quantities of arrivals in Antwerp with those at the port of Lisbon on the return of the Carreira da India. Accurate

¹³⁴ J. MATERNÉ, 'L'Heure d'Anvers, Marché des Épices Portugaises', in *C.G.E.R.*, 173.

¹³⁵ R. GASCON, 'Un siècle du commerce des épices à Lyon', *Annales: E.S.C.*, 646.

¹³⁶ for example, Jacques BERNARD, *Navires et Gens de Mer à Bordeaux*, S.E.V.P.E.N., Paris (1968), vol. I, 34.

¹³⁷ see Francis BRUMONT, 'El comercio exterior castellano a mediados del siglo XVI: un memorial 'de las mercaderías que entran en el Reyno'', in Hilario ALONSO CASADO, *Castilly y Europa, Comercio y Mercaderes en los siglos XIV, XV y XVI*, 179-.

¹³⁸ Hilario CASADO ALONSO, 'El Comercio Internacional Burgalés en los siglos XV y XVI', in *Actas del V Centenario del Consulado de Burgos (1494-1994)*, Excma. Diputación Prov. de Burgos (1995); RAU, Virginia, 'Uma família de mercadores italianos em Portugal no século XV: os Lomellini', sep. de *Revista da Faculdade de Letras de Lisboa*, XXII, 2nd series, no. 2 (1956), 721.

statistical series, however, fail to avail themselves. Materné has estimated that quantities of pepper imported into Antwerp rose from 2000 quintals in 1504, to 3000 quintals between 1508-10, up to 8000 quintals between 1511 and 1514. From the second quarter of the sixteenth century, he claims that quantities rose to 40.000 even 50.000 quintals per year. But, these statistics that Materné presents are very suspect - they are endowed with no other authority than his own - and cross-referring to the statistics we have on the cargoes of home-bound Indies fleets, Materné's figures exceed those brought back to Portugal itself.¹³⁹ The question of Antwerp's exclusiveness obviously cannot be tackled in this way.

Armando Castro, evidently drawing on the dimensions of the European market as estimated by Konrad Rott in 1579/80 and the memorandum for the consul of the Hanse in 1611, has divided up the European market for Portuguese spices over the course of the sixteenth century in the following manner¹⁴⁰:

¹³⁹ Jan MATERNÉ. 'L'Heure d'Anvers, Marché des Épices Portugaises', in *C.G.E.R.*, 172.

¹⁴⁰ CASTRO, *História Económica de Portugal*. ., III, 113. The author does not cite any source, though his statistics regarding the English market would seem to be accurate. We have two customs entries for the port of London for 1559 and 1565; taking the sales value, recorded by Thorold Rogers, this would amount to 801 and 1705 hwt. respectively, see THIRSK. Appendix 1, *Economic Policy and Projects. The Development of a Consumer Society in Early Modern England*.
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Table 6. The European market for Portuguese spices in the sixteenth century (according to Armando Castro).

Flanders	30 - 40.000 quintals
England	1000 quintals
Spain	1000 quintals
Morocco	200 - 300 quintals
the Mediterranean, via Gibraltar	50 - 100 quintals
France	100 quintals

If we accept these figures at face value and assume that English and, let us say, half of French imports were re-exported via Antwerp, we can conclude that Flanders, and Antwerp specifically, would have constituted the destination of 96.325% of total Portuguese spices marketed. It is the best we can muster. There is simply no statistically sequenced information from the surviving records of the Casa da Índia at Lisbon, the only place from which this flow might have been measured. For our period, we have no parallel to the 1498 Saragossa sugar ordinance stipulating the volumes of private export as well as its respective destinations.

We must assume that the Antwerp entrepot held as much for private commerce as it did for the Portuguese Crown, even if the itinerary of the arms producer, Jean Rapé, who undertook a trading mission in 1559 between Porto and Bruges, is significant for its demonstration that Portuguese spices were not being shipped exclusively up the principal trunk route but on minor routes and not uniquely between Lisbon and Antwerp.¹⁴¹ But otherwise, the structuring principles of capitalism that divided up the world embraced the free market just as forcefully as they had convinced the Portuguese King. Precious metals, shipping materials, grain, cloth - all these fundamental inputs into the Portuguese economy had come traditionally from the north. It can be seen how Antwerp seized for itself the role of a centralising switchboard. Thus, for instance, what had in the first half of the fifteenth century constituted a regular maritime link between Lisbon and Danzig and the other Livonian port cities, withered to one sole voyage between 1460-1500. Henceforth, Portugal was linked with the Baltic exclusively across Antwerp.¹⁴² In conclusion, we might do best to echo

¹⁴¹ Van den BUSSCHE, *Flandre et Portugal* (1874), 73-75.

¹⁴² Philippe DOLLINGER, *Die Hanse*, Stuttgart: 1966, 337. This may, of course, be a calculation drawn from Hanseatic records only, in which case it would remain to establish what the trends were for Portuguese shipping sailing north. That the Lisbon-Danzig leg withered is no proof that Lisbon-Antwerp boomed.
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Part II. BEYOND THE PORTUGUESE: THE RE-EXPORT TRADE OF PORTUGUESE SPICES IN EUROPE.

5. THE GEOGRAPHICAL DISPERSION OF PORTUGUESE SPICES FROM ANTWERP - TRACING THE FLOWS.

The direction of the thesis switches here from an analysis of policy, particularly the Portuguese choice of Antwerp as staple market and the political and commercial dimensions that surround such a decision, to the physical realities - the flows and the mechanisms of exchange - that constituted the European re-export trade of spices. I shall try to follow the spices' movements starting from the trans-shipment process at Antwerp as far as their geographical reach allows us. The appearance of colonial goods at distant and obscure markets at the very ends of Europe, often through newly implemented routes and forms of exchange, were forged in connection with the Portuguese Discoveries and constituted the Discoveries' logical counter-extension, in the same way that Newton's second law of motion demands that forces produce equal and opposite reactions. It interests me that at a time when Portugal's attentions were overwhelmingly focused on the construction and experience of overseas empire, to such an extent one could think she no stood firmly within Europe, the country's roots were buttressed in an unconscious but fortifying mesh of European exchange. We can observe this in the new gauging of the Portuguese quintal, the unit for weighing pepper and other 'heavy' spices, which was calibrated to that of the 'peso de Nuremburg'.¹

A case of unconscious history awaiting its write-up? Except that clear resonances from the far-flung lands of eastern and central Europe relating to the spice trade on occasion did make themselves heard back in Lisbon. Rui Fernandes de Almada's exposition of the political situation in Denmark and Sweden in 1521 was motivated by the fact that Portuguese commercial interests were at stake. It had been reported that if the truce between the King of Poland and the Grand Master of the Teutonic Order (*Mestre de Prussa*) were to go ahead, then Portuguese spices, and particularly pepper, would be able once again to flow to that part of the world.² On other occasions this perception was acted upon: Damião de Góis exploited his visit to the Jagiello court at Cracow where he was to enquire for the hand of Princess

¹ M.V. Cotta do AMARAL, *Privilégios de mercadores estrangeiros*. . (1965), 19, citing H. HAUSER & A. RENAUDET, *Les débuts de l'âge moderne*, col. Peuples et Civilisations, P.U.F., 4 ed., Paris (1956).

² letter addressed to D. Manuel, dated Bergen-op-Zoom, April 26, 1521 in A. BRAAMCAMP FREIRE, 'A Feitoria de Damião de Góis em Cracóvia', *Historico Portuguez*, VI, (1908). 413-415, documents n. 33: 50.2870/92585

Jadwiga with an eye for the Infante, Dom Luís, to conclude commercial agreements opening new markets for Portuguese spices.³ The description that follows, then, not only represents a tangible historical reality, but was one that constituted the very life-force of the deals concluded at Antwerp or Lisbon and beyond that, the political decision-making of the Portuguese Crown.

But we are not travelling with our goods uniquely across physical space. We are also moving down the hierarchy of trade, taking the trading system through the numerous intermediaries, of ever lesser importance, and towards the consumer, who also had a role to play in the *plano das Indias*, and whose contribution I hope to probe in Part III. But in this part the analysis shall concentrate rather on those men of commerce in their manifold configurations, both in their personal dealings with the Portuguese Crown at the highest level and through the impersonality of public markets, which gathered in certain cities as rarely as once or twice a year. But we need to begin on the quays of Antwerp.

The city of Antwerp and the spice trade.

Despite being hailed as a model of a sixteenth century port and protracted works on the quays, it seems that Antwerp could only offer haven to as many as twelve large ships at a time.⁴ Ships might have to wait as long a month to unload. Otherwise, they could cast anchor in mid-river for a matter of hours, while the goods were taken aground by small barges, as we see in certain contemporary oil paintings.⁵ A substantial proportion of goods arriving by sea at Antwerp was nevertheless trans-shipped from cheaper and more convenient moorings further up the Scheldt, such as the lee of the sand-bar of Walcheren, which stretched from Veere to Flushing, and offered sure anchorage to the biggest ships of the day (see Map 2). With the trend in shipbuilding shifting from the caravel to the carrack around 1540, outports such as Walcheren and Arnemuiden could capitalise on the risk that these massive craft faced in sailing up shallow tidal estuaries such as the Scheldt. Much of the

³ reported in Marcel BATAILLON, 'Le Cosmopolitisme de Damião de Góis', in *Études sur le Portugal au temps de l'humanisme*, Fundação Calouste Gulbenkian, 127.

⁴ W. BRULEZ, 'Les escales au carrefour des Pays-Bas (Bruges et Anvers, 14e-16e siècles)', in *Receuil de la Société Jean Bodin*, t. XXXII, (1974), 429. For a contemporary eulogy of Antwerp's port facilities, see Richard Clough's praise in Oscar de SMEDT, *De Engelse natie te Antwerpen in de 16e eeuw, 1496-1582*, Antwerp (1950-), II, 224.

⁵ 'View of Antwerp about 1540' in the collection of the National Scheepvaartmuseum, reproduced in Gustaaf ASAERT, 'Antwerp and the Sea' in Jan van der STOCK ed., *Antwerp, story of a metropolis. 16th-17th century*, catalogue of the exhibition held at the Royal Museum of Art and History, Brussels, 1993, 134-148-1580
 European University Institute DOI: 10.2870/92585

traffic, moreover, particularly Baltic products, was merely trans-shipped and did not need specifically to come up the Scheldt.⁶ Walcheren, finally, was not only the point from which goods were transferred to warehouses close to the Antwerp quays in those strange craft particular to the *schippers op Walcheren*, the lighters which could, if necessary, float over the sandbanks at high tide, but, with the spread of the practice of sale on sample in Antwerp's permanent markets, more consignments were withheld for storage in Walcheren itself.⁷

In addition to the two tolls levied at the Portuguese end that we have already touched upon in describing the early 'customs house' sales strategy of the Portuguese authorities, two more were imposed at Antwerp. The *Sewisshetol*, sometimes called the Zeeland toll, was drawn on all shipping sailing the Honte. The other toll universally levied by the Emperor, as Duke of Brabant, was known as the Great Toll of Brabant.⁸ Together, they were frequently referred to as *le droict de deux centièmes* and, as we can judge from the documentation held in the name of the Portuguese Feitoria of Antwerp, went strongly challenged, enough for the imperial legislation on the issue to change repeatedly.⁹ The Portuguese King, for example, insisted in 1543 that he be exempt from duties on merchandise carried on his account and exported from Antwerp. Forcefully lobbied by the secretary of the Crown Feitoria, Francesc Pessoa, this was finally granted him.¹⁰ An outcry was similarly launched from the consortium of spice contractors, who protested in March 1552 against the manner of estimation, and this too was answered to their benefit.¹¹

With the explosion of the quarrel regarding the Portuguese Crown's tolls payments in 1543, the port of Antwerp appears to have been temporarily boycotted by the Portuguese Crown and recourse was made to alternative mooring at Arnemuiden, the outport of

⁶ W. BRULEZ, 'Les escales au carrefour. .', (1974), 420.

⁷ R. ROOVER, review of E. SABBE, *Anvers, métropole de l'occident (1492-1566)*, Brussels (1952), in *Revue belge de philologie et d'histoire*, XXXI (1953), 1111-2. Also, S.T. BINDOFF, *The Scheldt Question*, London (1945), 108-37, and the monograph by Z.W. SNELLER, *Walcheren in de 15e eeuw*, Utrecht (1917).

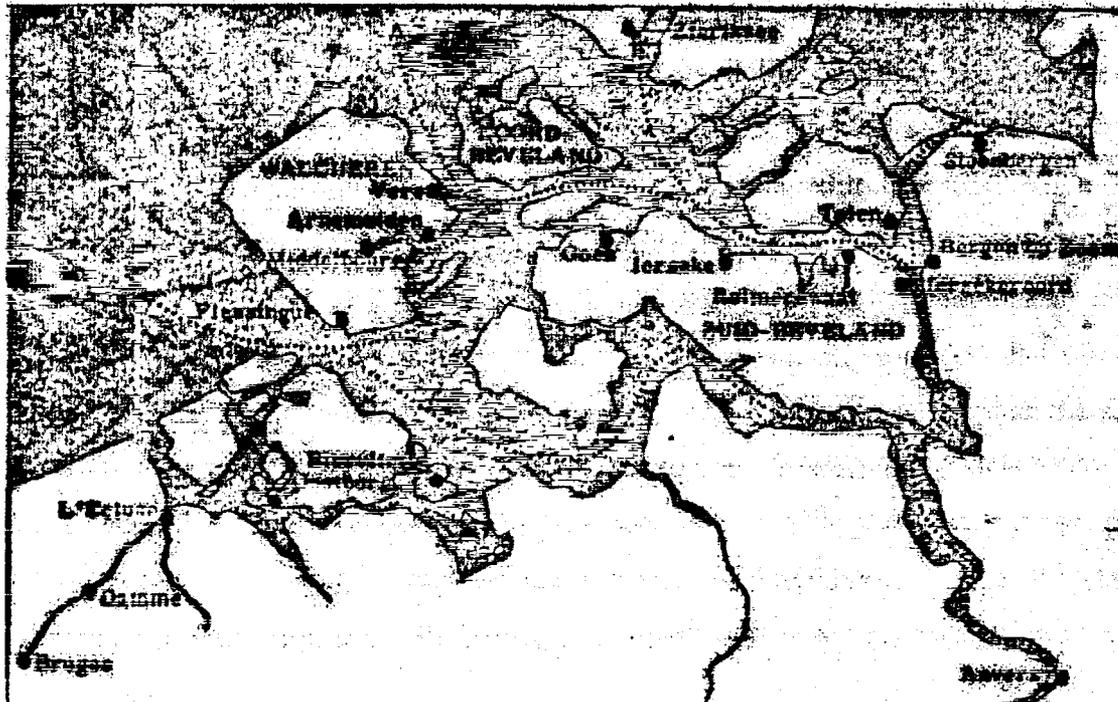
⁸ L. GUICCIARDINI, *Description of the Low Countreys* (1593), 28v.

⁹ see, for example, CFP, caixa 3, no. 3, caixa 4, docs. 13 & 14.

¹⁰ A licence was made out for 'manilles et choses de métal, qui viennent d'Allamagne pour sa mayson des mines et contraction de Guinée, et aussy d'aucuns biens et choses, lesquelz le roy et la royne et l'infant Don Luys demandent avoir pour leur plaisir et récréation', published by R. HAEPKE in *Niederländische Akten und Urkunden zur Geschichte der Hanse und zur Deutschen Seegeschichte*, Munich (1913), 402.

¹¹ The contractors' complaint is the *Déclaration des marchandises d'especerie entrans en ces pays lesquelles en l'estimation dernièrement faite pour lever le droict de deux centièmes en la ville d'Anvers ont esté modérées souz le très noble plaisir de la Majesté de la Royne*. Archives Générales du Royaume, Bruxelles, Chambre des Comptes, carton 436.
Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
 Completed at the University of Toronto

Map 2. The waterway of Flanders: culverts, imports and exports.



Source: R. DOEHAERD, *Etudes Anversoises.* .. (1963), 273.

Middelburg, a vigorous market town in its own right neighbouring Antwerp (see Map 2) whose exports increased between 1543-45 as much as twenty fold to constitute between 69-82.5% of the total exports of the Low Countries.¹² Portuguese relations do appear, nonetheless, to have anteceded the quarrel with Antwerp. The first explicit communication between the Portuguese *nacão* and Middelburg appears to date from a mission to the Portuguese feitor in Antwerp beseeching his nation that they should 'continue to come to Arnemuiden as they habitually did and not go to Antwerp' (*continuassem a vir a Arnemuiden segundo costumavam e não fôsem a Antuérpia*), and such was the contact in the 1530s that Pedro Genosa, *representante do Rei de Portugal*, was installed to oversee Portuguese traffic through the 'new cirt port' (*novo porto da cidade*) and privileges were concretised in July 1538. Earlier that year, on 27 April 1538, the Antwerp feitor had communicated to the city of Middleburg that the King's fleet was on its way (*está de caminho*) and that a royal representative might be received. Thus it appears that the Portuguese, just like the Merchant Adventurers had done thirty years earlier, sought to play Antwerp off against Middleburg so as to secure the most favourable set of privileges for unloading, storing and trans-shipment of spice cargoes arriving in Brabant and avoiding the *Sewisshe tol*, sometimes called the Zeeland toll, that commerce with Antwerp entailed for sailing the Honte.¹³

Unloading the ships, possibly with the use of the great crane, was a prerogative of the associations of carriers and porters (sackcarriers, deal carriers, barrowmen), organised as corporations (*naties*). The whole procedure was supervised by the city magistracy, which set down rules, limited their numbers and established suitable tariffs.¹⁴

The fact that there was an established obligatory public procedure for treating and selecting the spices arriving in Antwerp suggests that the transaction wasn't ever fully pre-arranged between private parties, and that some portion went directly on to an open Antwerp market. This might have been a response to the furore accompanying the abrogation of the staple monopoly in alum in 1491, and which was considered detrimental to the overall tenor of trade in the city. The job itself was known as *garbeleuren* and was undertaken by the *meerseniens* at the *maison du poix (poids)* in the presence of a scribe from the Portuguese Feitoria. First of all, the pepper was cleaned of its impurities, mostly sand and gravel; dry

¹² W.A. ENGELBRECHT, *Esboço das relações.*., 423.

¹³ for the parallel, see BISSON, *The Merchant Adventurers and the Tudor Commonwealth: The Formulation of a Trade Policy, 1485-1565*, Ohio State University PhD (1987), 162.

¹⁴ see G. H. VAN DER WOUDE (2001) *Portuguese and the Dutch (1499) spice trade, 1480-1580* European University Institute

ginger was separated from moist ginger; crushed nutmeg was laid aside; the stems and dust was taken off the cloves. These could then be sold as the scraps (*déchets*), which might represent up to 6% of the sample's weight (10% in the case of cinnamon and ginger, according to Meder) and could command between 25 and 50% of the normal asking price. A quality label was assigned the sacking, the unit was weighed and the product was finally ready for sale.¹⁵ Any falsification of the goods at this stage would be met with the harshest of penalties by the civic authorities.¹⁶

It remains to determine the nature of this open market at Antwerp, whether it ran according to the twice annual fairs held in the city, not to speak of the other two Brabant fairs held nearby in Bergen-op-Zoom, or whether this public market was a permanent market, with a continuous sale of these spices, whether from humble stalls or giant quayside warehouses. But we cannot ignore the fact that a vast amount of trade was privately contracted trade between the Portuguese King, represented by the Casa da Índia, and family businesses or else complicated international consortiums of merchants of scale. Much of this contract trade, as we shall see, was pre-arranged at Lisbon. At this level, then, it would seem Antwerp played 'un rôle purement transitaire', a mere point of trans-shipment or 'breaking bulk' - but in reality, the market was not to be avoided, for contractors here met with buyers, contracts were split into sub-contracts or else became simply sales, and the spices passed hands.

Overland redistribution.

Portuguese spices surged on to the European market just at a time when the physiology of overland redistribution altered radically, offering a wider prospective sales area than had ever been the case before; what Mauro has described as the shrinking of the dimensions of Europe over the course of the sixteenth century (*'un rétrécissement séculaire*

¹⁵ adapted from the *Ordonnance sur le commerce des épices à Bruges*, 4 March 1470. Translated by Gheldolf and published by VAN DEN BUSSCHE, *Flandre et Portugal*, (1874) as document H, 193 ff. Original in Archives de la ville de Bruges, Roodenbouck, fo. CCXLII. Further information has been drawn from MATERNÉ, in *C.G.E.R.*, 172, probably taken from the Antwerp *Ambachtsboeken*. E. GEUDENS, *Het hoofdambacht der Meerseniers* would be very useful. CA' MASSER estimates the proportion of *déchets*, *Relazione.* ., 30.

This procedure was open to considerable criticism, particularly from the contracting consortiums, who held that the public weights were weighing two or three, sometimes even six pounds per bale out of line, with the proceeds creamed off as private profiteering. Consequently, a set of public *serviteurs* were asked to perform the operation and a *commissaire* requested to supervise and determine its cost in 1561. *Requestboek*, II, fo. 332, ACA and GORIS, *Etudes sur les colonies marchandes méridionales.* ., 203.

de l'espace européen').¹⁷ By this, I do not mean the constant road improvement propelled by technological advancement, the ever wider application of cranes, pile-drivers, pumps and, with respect to river transport, dredgers and sluice gates.¹⁸ Rather, in the first half of the sixteenth century there emerged a string of specialised consignment companies in Antwerp which guaranteed delivery by virtue of lengthy commercial journeys across Europe, principally along the Rhine axis down into Italy, rather than simply short stretches of haulage to the next centre of trade, at which the consignment was customarily passed on to the next local agent.¹⁹ This challenge that the rise of the consignment company entailed for tradition, which had become legally enshrined as *Rodrecht* in several parts of Europe, was hotly contested, nowhere more than the village communities operating the Alpine passes.²⁰

But the greater part of Antwerp's spices - despite the speculation that was conducted on the price differential between the Antwerp and Venetian markets - was not heading across the Alps. Nor need we dwell at great length on road-haulage into France; for one, the kingdom was steadily building up its own direct access to the Levantine markets, and then, as the Florentines found out, it was not a market where great quantities of spices could be sold. Instead, as we know from contemporary market estimations (see Figure 1), the lion's share of Antwerp's spices gravitated towards the German frontier; in one contemporary estimation as much as 36.000 quintals of pepper a year. On this route we find that Portuguese spices were most commonly sent on by professional carriers under commission, consignment companies, many of whom wouldn't have gone very far down the Rhine, typically as far as Cologne. Most of these carriers registered in Antwerp between 1488 and 1556, such as the Frammersbach im Spessart, came from around Aachen, from the small towns of Marburg, Lahn and Lauterbach. Their dense clustering around this particular area, half-way between Antwerp and Cologne, lends weight to the hypothesis that the trade axis between Brabant and

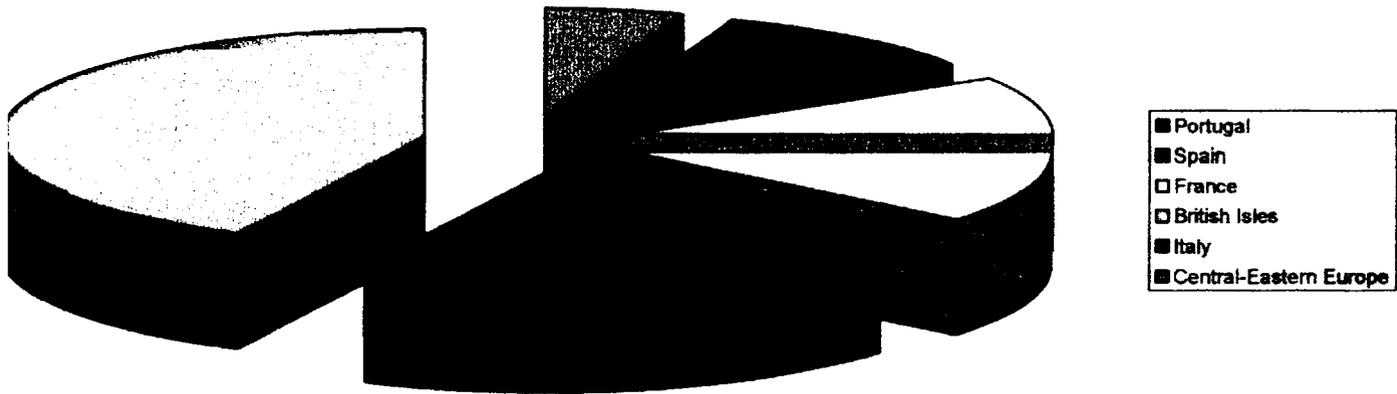
¹⁷ F. MAURO, *Le XVI^e siècle Européen. Aspects économiques*, Paris: Presses Universitaires de France, 3 edn. (1981), 145.

¹⁸ G. SINGER, *A History of Technology*, vol. III, 420, Oxford (1957); a good summary is Frédéric MAURO, 'Progrès des routes terrestres' and 'Amélioration des voies d'eau', section III (a) & (d), in *Le XVI^e siècle européen*. (1981).

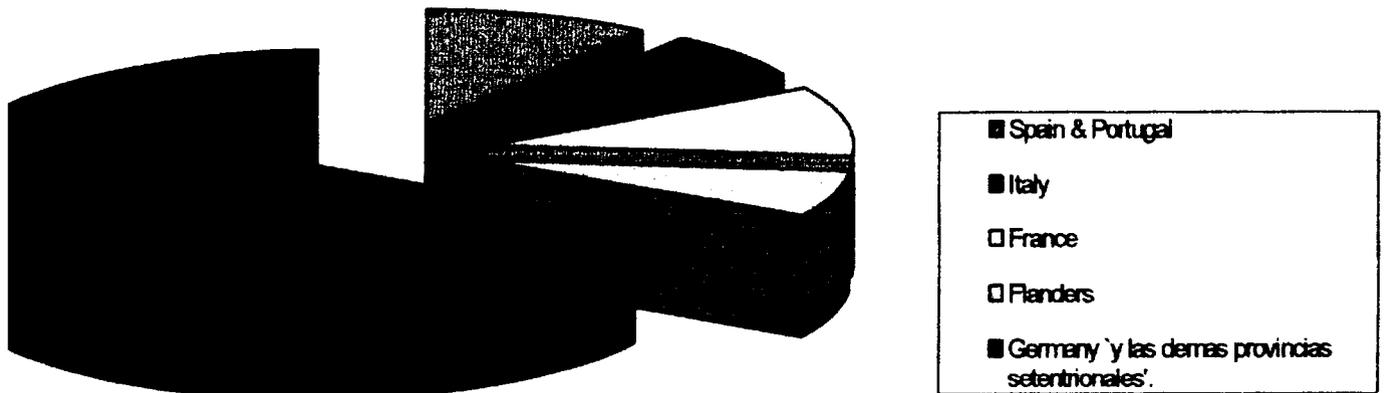
¹⁹ see W. BRULEZ, 'L'exportation des Pays-Bas vers l'Italie par voie de terre au milieu du XVI^e siècle', in *Annales E.S.C.*, 14 (1959), 461-491 and V. CHOMEL & J. EBERSOLT, *Cinq siècles de circulation internationale, Ports-Routes-Trafics*, Paris (1951).

²⁰ Johannes MÜLLER, 'Das Rodwesen Bayerns und Tirols im Spätmittelalter und zu Beginn der Neuzeit', *Vierteljahresschrift für Deutsche Wirtschaftsgeschichte*, 1905, 364ff. 1480-1580
 European University Institute DOI: 10.2870/92585

Figure 1. European market estimations for Portuguese pepper in the sixteenth century



as estimated by Konrad Rott, 1579-80.
 Source: H. KELLEBENZ, 'Der Pfeffermarkt um 1600 und die Hansestädte. .', (1956), 33

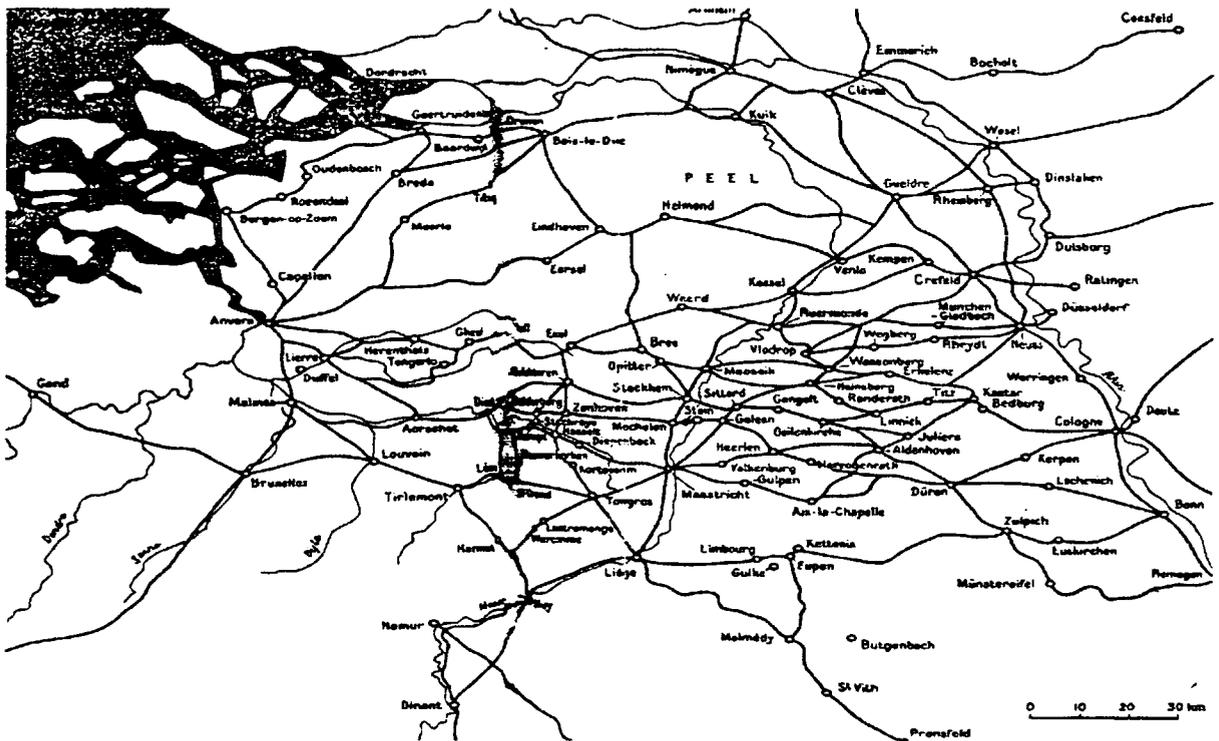


as estimated by an expert in the Spanish contract in 1611.
 Source: H. KELLEBENZ, 'Autour du 1600: le commerce du poivre des Fugger et le marché international. .', (1956), 7.



Capsule B: Roads.

Europe was, even in the sixteenth century, criss-crossed by innumerable transport routes supporting long-distance trade. Carters trading along these roads of beaten earth actively searched out the weak points and breaches in the turnpikes so as to minimise their travel costs. This only encouraged, as Marc Bloch concluded from his study of the transport infrastructure in Brandenburg, the undermining of the singular axis and promoted, contrarily, innumerable pistes, constant branchings off, the roads coming together only at solitary, necessary points of convergence - fords, bridges, dykes over swamplands.¹ We can see this in the road haulage between Antwerp and the cities of central Germany. While there were countless possible routes, as a result of natural obstacles, chiefly aqueous and broachable only at specific points, the principal routes can be enumerated. There was the most direct route to Cologne via Herenthals; a second went through the Maas



Source: R. DOEHAERD, *Etudes Anversoises*. (1963).

valley and on via Obbicht, Sittard and Bedburg. A further passed Turnhout and Weert, crossed the Maas at Roermond to reach Cologne via Grevenbroich.² Chronic political instability in the Duchy of Gelders spasmodically altered the dynamic configuration we have sketched; during 1542-3 commercial convoys were obliged to pass via Limburg or through Mecheln and Liège, even via Malmédy.³ With unrest in Cologne in 1585, the route changed once more; this time for the *route haute* that went directly to Mainz.⁴

¹ Marc BLOCH, *Revue historique*, t. 184 (1938), 179, as cited by F. IMBERDIS, 'Sur les routes du Moyen Age', in *Annales d'Histoire Economique et Sociale*, no. 4, (October 1939), 415.

² Hermann KELLENBENZ, 'Landverkehr, Fluss- und Seeschiffahrt im Europäischen handel', *Actes du Septième Colloque International d'Histoire Maritime*, Vienna (1965), 86.

³ A. HUYSKENS, 'Die Krisis des deutschen Handels während des geldrischen Erbfolgekrieges 1542-3', *Annalen des Historischen Vereins für den Niederrhein*, 81, (1906), 46-70.

⁴ H. THIMME, 'Der Handel Kölns am Ende des 16. Jahrhunderts und die internationale Zusammensetzung der Kölner Kaufmannschaft', in *Westdeutsche Zeitschrift*, XXX (1912), 469 ff.

Middle Germany was primordial for the clearing of goods arriving by sea at the Antwerp entrepot.²¹ They loaded up on to convoys of the slow-moving *Hessen-Wagen* at the Hessenhuis, though more valuable goods, such as precious stones, were still carried on the business agent's person. Stetten had a hundred pounds of pearls on him as he travelled from Antwerp to Augsburg in 1517.²²

A number of these consignment companies, and an ever increasing number, did longer distance hauls, to the cities of Augsburg, Nuremberg and Frankfurt, which Guicciardini highlights as the chief destinations of Antwerp's exports to Germany, even as far as Leipzig, where the Antwerp based merchant Leonhard Paris and the influential Imhoff company kept a trading agency.²³ This is duly reflected in the export statistics. Customs records reveal that export markets of German merchants *ad valorem* between 1543-45 were constituted of primarily German regions (80.5%), including Nuremberg (31%), Frankfurt (12%), Leipzig (9%), Cologne (8%) and Augsburg (8%).²⁴ The Portuguese factor in Antwerp, Rui Fernandes de Almada, was clearly correct in his estimation that Nuremberg was 'the commercial mainstay of the whole of Germany' (*a prinçepall escapula de toda Alemanha das mercadorias*).²⁵ At the beginning of the century, by contrast, Cologne appeared to have been the most significant inland exchange for spices headed for central European markets. Doehaerd breaks down the provenance of foreign merchants at Antwerp between 1488 and 1513, demonstrating the vast numerical superiority of German merchants, particularly those from the Rhineland (742, of which 531 came from Cologne alone) as oppose to southern Germans (237) and Italians (235).²⁶ Consequently, between 1490-1513, of 60 pepper

²¹ the best work on these carriers has been done by J. FREDERIX, *Het vraechvervoer over land naar de haven van Antwerpen (1448-1556)*, as an unpublished dissertation submitted to the Catholic University in Leuven (K.U.L.), 1969. Their importance is also brought up by PRIMIS, *Antwerpen*, VII, 2, p. 153 and EDLER, *Van der Molen.*, 131-2. Their positioning is displayed on a map in H. van der WEE and MATERNÉ, 'Antwerp as a World Market in the Sixteenth and Seventeenth Centuries', in Jan van der STOCK (1993), 25.

²² KELLENBENZ, 'Discussion des communications de M. Heers, Mlle. Rau, M.M. da Silva, Kellenbenz et al.', *Actes du V Colloque d'Histoire Maritime*, Lisbon 14-16 September (1960).

²³ L. GUICCIARDINI, *Description of the Low Countreys*, 27; R. DOEHAERD, *Etudes Anversoises.* , nos. 636, 2147, 2417, 2763.

²⁴ R. GORIS, *De export door de Duitsers uit Antwerpen in de jaren 1543-1545*, 135-147. He takes his material from the Algemeen Rijksarchief, Rekenkamer, 23357-23363. In these same years, the export of spices accounted for 22.3% of the total value of the Low Countries' exports to Germany.

²⁵ from Maria BARATA, *Rui Fernandes de Almada, diplomata português do século XVI*, Lisbon (1971), docs. XV and XXVIII.

consignments concluded in Antwerp, eight (13.3%) were negotiated for Cologne.²⁷

The great *Lagerstadt* of Nuremberg and, to a lesser extent, Augsburg, may have dethroned Cologne as principal central European re-distributor, but it seems unlikely that the routes of dispersal themselves had changed very much since the Middle Ages. Erhard Etzlaub's *Kompaßkarte* of 1501 suggests that there were a number of possible itineraries for trading routes.²⁸ On the watercourses, Albrecht Dürer's detailed diary account on the occasion of his journey from Nuremberg to Antwerp in 1520 helps to clarify the stops along the Main and Rhine at which both travellers and goods were constrained to present themselves for both toll payments and change of carriage or trans-shipment in accordance with the stipulated customs (*jus emporii*).²⁹ By the end of the Middle Ages, there were an estimated 62-64 toll stations along the Rhine.³⁰ The deleterious effects that the German customs system of the *ancien régime* engendered to the free flow and costs of trade were well known, in the words of the late sixteenth century Basel merchant Andreas Ryff 'a grievous annoyance and extortion of goods', and Heckscher is right to point out that the wave of social protest concerning the high prices of imported goods had as much to do with the tribute money paid on the Rhine as it did with the oligarchic commercial strategy of the big firms, more popularly denounced as capitalist extortion, or *Fuggerei*.³¹

In addition to the tolls imposed by every petty *Landgraf*, the free flow of commodities was encumbered by the *Stapel- und Niederschlagrecht*, the customary law granted through privilege by which all passing transport (especially ships) was expected to stop, unload and offer their goods for sale, only after which it was permitted to proceed. Sometimes, it was required that goods remain exposed for as long as two weeks. Sometimes, the *Niederschlagrecht* was in fact *Umschlagrecht*, in other words the foreign merchant was not allowed to continue the transport of his goods, even if his goods remained unsold on the local

²⁷ R. DOEHAERD, *Études Anversoises.*., #1576 (1507); #2477, #2428, #2513, #2530, #2549 (1512); #2654, #2730 (1513).

²⁸ Herbert KRÜGER, 'Des Nürnberger Meisters Etzlaub älteste Straßenkarten von Deutschland', *Jahrbuch für fränkische Landesforschung*, 18 (1958), 1 ff.

²⁹ Albrecht DÜRER, *Tagebuch der Reise in die Niederlanden*, ed. Fr. Bergemann, Leipzig (1916); a fuller edition has been edited by J. Veth and S. Müller, *Albrecht Dürer's Niederländische Reise*, 2 vols, Berlin - Utrecht (1918). Dürer needed 18 days to complete the journey, excluding voluntary stops, though from Bamberg, where Dürer joined the River Main, as far as Cologne where he disembarked, the boat journey was exclusively upstream.

³⁰ E. GOTHEIN, 'Zur Geschichte der Rheinschiffahrt', *Westdeutsche Zeitschrift für Geschichte und Kunst*, XIV, (1895), 254.

³¹ E. HECKSCHER, *Mercantilism*, trans. M. Shapiro, London (1955), vol. 1, 56-57.

market: it was a policy to promote local carriers. The *Stapelrecht* applied in the Rhineland towns of Cologne, Mainz, Strasbourg, Basel, Münden and Bremen on the Weser, and Frankfurt on the Oder.³² Cities such as Nuremberg, however, had forged their commercial success on extensive trade privileges like the charter of duty exemptions granted by Emperor Ludwig der Bayer in 1332, and mutual trade agreements with a number of towns of the Reich such as Cologne (1340) and Frankfurt (-1350), and beyond them, the port cities of the Hansa such as Lübeck (1373), and the Burgundian domains of Bruges, Antwerp, Flanders and Brabant (1361).³³

In any case, all the evidence suggests that lighter consignments and typically spices would have been accorded the speed associated with road haulage, particularly in the upper reaches of these rivers where progress against the current was slow. Toll records differentiate between the different types of road-going vehicles, much as motorway toll booths do today. In Transylvania, spices would have travelled in the *currus ligatus*, a cart covered by a fastened tarpaulin that was exempt to inspections, but charged a higher road toll than the *currus oneratus*. Occasionally this toll was paid directly in pepper, testifying to the nature of the goods carried.

Terrestrial travel, however, was not only swifter but freer than fluvial transport. Strieder, following Mone, has suggested that between Antwerp and the Rhine the Campine was criss-crossed by a web of tracks, chosen by the carters so as to avoid toll stations.³⁴ Cologne was in part dethroned by carters heading for Bonn so as to avoid the duties that the city of Cologne demanded. Other major cities like Frankfurt would have been avoided if possible for their obligatory dues, in Frankfurt's case by way of Hanau den Main; in other cases, special agreements were made that waived the standard staple rights of passing towns in return for a forfeit.³⁵

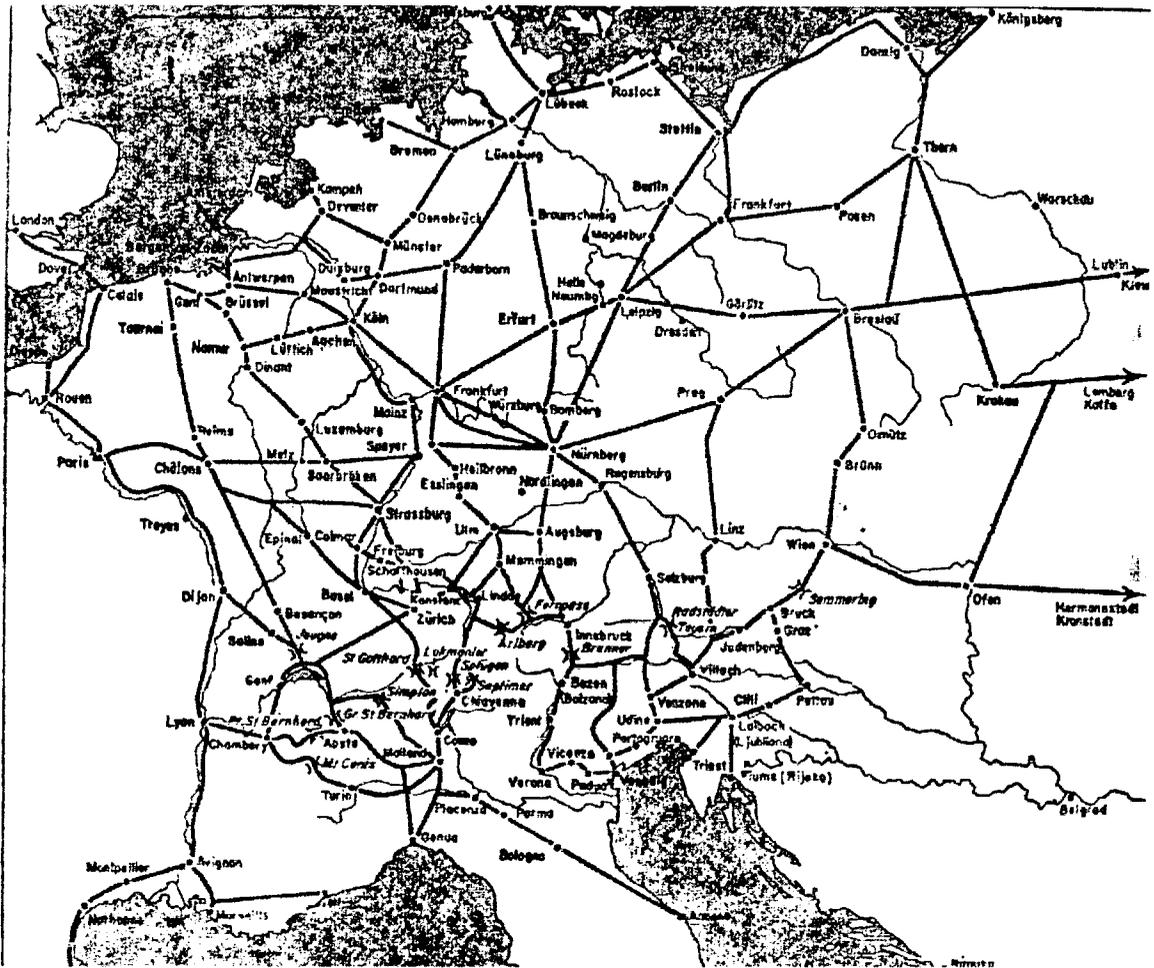
³² O. GÖNNENWEIN, *Das Stapel- und Niederschlagrecht*, Quellen und Darstellungen zur Hansischen Geschichte, ii, (1939); M. HAFEMANN, *Das Stapelrecht, eine rechtshistorische Untersuchung*, Leipzig (1910); B. KUSKE, 'Handel und Handelspolitik am Niederrhein vom 13. bis 16. Jahrhundert', *Hansische Geschichtsblätter*, (1909).

³³ the privileges mentioned served as the basis for repeated renewals. The 1361 concession regarding the Low Countries was reiterated by Philip the Good on 29 January, 1432, again in 1445, and confirmed on July 12, 1468 (Confirmatio der in Flandern und Brabant den Nuernbergischen Kaufleuten zu ihrer handthierung ertheilten Freiheiten), Johann-Ferdinand ROTH, *Geschichte des Nürnberger Handels*, Leipzig (1800-1802), §6.

³⁴ J. STRIEDER, *Aus Antwerpener Notariatsarchiven*, Deutsche Verlags-Anstalt, Stuttgart/Berlin/Leipzig (1930), XXVII.

³⁵ Ermintrude von RANKE, 'Die wirtschaftlichen Beziehungen Kölns zu Frankfurt am Main', in *Süddeutschland und Italien im 16. und 17. Jahrhundert (1500-1650)*, Vierteljahresschrift für Sozial- und Wirtschaftsgeschichte, LVII (1924), 54-94.

Map 3. Central European trading routes.



KELLENBENZ, Hermann. 'Landverkehr, Fluss- und Seeschiffahrt im Europäischen handel', *Actes du Septième Colloque International d'Histoire Maritime*, Vienna (1965), 152 ff.

As with the trading leg between Lisbon and Antwerp, the European re-export of spices appears to have been decidedly undemocratic. Large, single firms like the Imhoff dominated the trade between Antwerp and southern Germany, so much so that Albrecht Dürer arranged payment for his return trip from Antwerp to Nürnberg in June 1521 with none other than Hans Imhoff the Elder.³⁶ In 1522, for example, we have word of the Imperial Treasurer (*Reichsfiskal*), Doktor Marth, indicting the Imhoffs for monopoly in the light of a treaty signed with the King of Portugal which established that ‘over the next few years nobody but the Imhoff will be selling Indian pepper, ginger and spices’ (*in etlichen kommenden Jahren niemandem als Imhoff von seinem indischen Pfeffer, Ingwer und Spezereien verkaufen*).³⁷ But this trend was only reinforced with the Imhoff’s apparent retraction from Lisbon about 1523. In 1544, for example, as much as 85% of pepper destined for Nuremberg was in the hands of a single firm, being that of the Imhoff.³⁸

The redistributive regime between Antwerp and Central European wholesalers, then, seems to have been tightly restrictive, browbeating the competition of Antwerp merchants who had at one time been given special customs dispensations on the presentation of a wooden cup symbolically containing a pound of pepper at the Nuremberg town hall. But Antwerp merchants seem to have clung to the ever more uncompetitive water than road transport arrangements. In any case, the legislation initiated by the Reichstag in 1512 against speculative purchases in commodities such as spices so as to prevent the imposition of unjust prices on the German public dropped short; its ineffectiveness is only testified by a sustained wave of invective against trading monopolists as epitomised in Luther’s *Sermone vom Wucher* (1519) and his *Traktat über die Kaufshandlung* (1524).³⁹ This seems to have coincided with a more general denunciation of *la cupidité des trafiquants* engaged in the spice trade issued by Erasmus, and probably in response to high prices.⁴⁰ Complaints were officially taken up again at the Reichstag at Worms in 1521 and again at Nuremberg in 1522/23, where it was proposed that a company’s trading capital and number of factories be limited to a maximum

³⁶ Albrecht DÜRER, ‘Nuremberg to the Netherlands, 1520-1’, in J.G. LINKS, *Travellers in Europe. Private Journeys of the Great and Forgotten*, London (1980), 117.

³⁷ Dietmar TRAUTMANN, ‘Imhoff’ in *Neue Deutsche Biographie*, Berlin (1974).

³⁸ Ludwig VEIT, *Handel und Wandel mit aller Welt*, (1960), 23.

³⁹ Luther’s treatises are published in *Luther’s Works*, ed. J.W. Lunden, Philadelphia (1986). ‘On Trading and Usury’ is in vol. 45, 273-398.

⁴⁰ ERASMUS, Dedicatory epistle to King João III intended to accompany his *Chrysostomi Lucubrationes*, but never published. see Marcel BATAILLON, *Erasmus et la Cour de Portugal*, separata do Arquivo de história e bibliografia do Ilh. Coimbra (1997), pp. 20-21 and the European spice trade, 1480-1580

of three, a new *Reichszoll* established (calls had been made during discussion for the complete abolition of all internal customs), and a ceiling sales price for certain goods instituted. But as with so much of imperial reform, the projects floundered in the face of deeply established interests and a vacillating executive, who was forced to renounce the anti-monopoly law in the Madrid edict of 10 March 1525 and, eight days later, confirm the Fuggers privileges.⁴¹

What was the proportion of spice from Antwerp that flowed on beyond southern Germany? The Augsburg delegation to the Imperial Diet at Nuremberg insisted that less than 1/20 of imported spices was consumed locally and that the rest was sold on at profit, but they were at pains to counter the steady flow of religious invective insinuating that the consumptive decadence and drain of silver affecting German lands was their doing.⁴² But even if the highest concentration of spice consumers was not to be found in the free cities of southern Germany, passage through Nuremberg accorded the consignments the much esteemed official stamp of quality control, 'Nürnbergisch gerecht geschaut gut', the D.O.C. for consumers of the late Middle Ages, accorded by an inspector (*Beschauer*) of the town council.⁴³ The city's archives reveal requests from cities farther east for such experts: this, I suppose, might be interpreted either as a measure of Nuremberg's esteem, or else an indication of how much spices flowed on to the east.⁴⁴

Whether the spices physically passed through the city of Nuremberg or not, for we have reference to consignments loaded up at the Frankfurt fairs but delivered to Nuremberg merchants in Leipzig, it seems that Nuremberg trading companies dominated and had dominated the supply of central European markets since the early fourteenth century, and particularly from the privilege of free trade that King Casimir the Great had granted Nurembergers in 1365, their range of operations consequently extending into Bohemia and

⁴¹ Friedrich LÜTGE, *Reich und Wirtschaft. Zur Reichsgewerbe und Reichshandelspolitik im 15-18. Jahrhundert*, Gesellschaft für Westfälische Wirtschaftsgeschichte, Heft 8, (1961), 19; Hajo HOLBORN, *A history of modern Germany: the Reformation*, Princeton (1982), 67-77.

⁴² cited by Lisa JARDINE, *Worldly Goods.* .. London: Macmillan, (1996).

⁴³ the *Schau* can be traced at least as far back as 1441, when it was conducted on saffron in the Imhoff's headquarters; however, from the end of the fifteenth century, the rite moved to the *Waage*. A municipal order of 1502 regarding the *Beschauer* is to be found in *Staatsarchiv Nürnbergs*, Rep. 60a, Verlässe des Inneren Rates, v. 1, 15 & 20 July, 1502.

Silesia and as far as Lemberg.⁴⁵ In 1507, the city could boast to the King of Naples regarding the trade of saffron that not only was Nuremberg the emporium serving the whole of Germany, but that it served all the kingdoms to the north (*Cum major pars croci ex omni terrarum orbe huc tanquam ad comune tocius Germaniae emprium afferatur, hincque in omnia regna septentrionalia avehatur.* .), though to be fair Nuremberg's redistributive networks of Antwerp and hence Portuguese spices were largely hemmed south of the axis running between Posen and Warsaw and to the north of Ofen or Buda, for a short time still the capital of the Kingdom of Hungary.⁴⁶ For example, Fugger declined Rui Fernandes' offer of a spice contract with the argument that his clients in Bohemia and Hungary were not disposed to buy.⁴⁷

With the steady decline of Nuremberg long-distance trade from around the middle of the sixteenth century, traditional routes from the southern Netherlands, Frankfurt and Nuremberg and running via Erfurt, the great *Tauschplatz* or point of exchange between Upper and Lower Germany, and on to Wroclaw and the Polish capital of Cracow, which were considered amongst the most important in Eastern Europe, were replaced with a more northerly European traverse that developed from Cologne across Leipzig and Posen, but also branched off to Bohemia and Silesia.⁴⁸ A part of spices reaching Posen were equally re-

⁴⁵ The reference to deliveries to the Nuremberg merchants Jakob Blander, Jacob von Tago and Hans Viniol in Leipzig from the Frankfurt fairs is cited in G. FISCHER, *Aus zwei Jahrhunderten Leipziger Handelsgeschichte*, Leipzig (1929), 215, and refers to Kb. 1605, B1.42f.

⁴⁶ Letter to the King of Naples, 1507, Staatsarchiv Nürnberg, Briefbuch 59, fol. 232. In terms of Nuremberg trading ventures with *regna septentrionalis* one might cite the activities of Paul Müllich of Nuremberg who, via his brother Mathis in Lübeck, furnished the Danish court with *opera venetica*, cited in Philippe BRAUNSTEIN, 'Wirtschaftliche Beziehungen zwischen Nürnberg und Italien im Spätmittelalter', in *Beiträge zur Wirtschaftsgeschichte Nürnbergs*, I (1967), 389.

King Władysław Jagiellon stipulated in 1444 that no foreign merchants, indeed only Lembergers were entitled to trade further to the east of their city. For this, and more generally, see F. LÜTGE, 'Der Handel Nürnbergs nach dem Osten im 15/16 Jahrhundert', in *Beiträge zur Wirtschaftsgeschichte Nürnbergs*, Bd. 1, (1967), pp. 343-52; H. AMMAN, 'Wirtschaftsbeziehungen zwischen Oberdeutschland und Polen im Mittelalter', in *Vierteljahresschrift für Sozial und Wirtschaftsgeschichte* (Wiesbaden), 48, (1961). Check against J. JANAČEK, 'Der böhmische Aussenhandel in der zweite Hälfte des 15 Jahrhunderts', in *Historica*, IV (1962), 39 ff. Also, M. SCHOLZ-BABISCH, 'Oberdeutscher Handel mit dem deutschen und polnischen Osten nach Geschäftsbriefen von 1444', *Zeitschrift des Vereins f. Geschichte und Alterthums Schlesien*, LXIV (1908).

⁴⁷ letter of 5 October 1519, C.C., pte. Ia, m. 43, doc. 96.

⁴⁸ Marian MAŁOWIST, 'The Trade of Eastern Europe in the Later Middle Ages', in *Cambridge Economic History of Europe*, vol. II 'Trade and Industry in the Middle Ages', 2 ed., 532. Confirmed by G. FISCHER, *Aus zwei Jahrhunderten Leipziger Handelsgeschichte, 1470-1650*, Leipzig (1929). For Erfurt's position in the scheme of medieval German trade, see CARL von DANHBERG, *Beiträge zur G.*, 1680-1580

exported overland from Hamburg and Lübeck.⁴⁹ In all of these instances, German merchants acted as the active exporters, articulating their trade through subsidiaries or naturalised agents (as was the case with the Boners of Cracow) in major Polish cities; they sold on through a network of predominantly Jewish wholesalers active in any number of medium-sized Polish towns.⁵⁰

Portuguese spices would regularly have appeared as far east as central Poland, and occasionally as far east as Lithuania, their trajectory limited from further dispersal by a wall of new competition from the East, from similar goods that had nonetheless arrived in Europe along different routes and found Lwow as their point of disgorgement.⁵¹ In front of this wall was a zone where spices from both distributive systems freely circulated, particularly pepper which tended to be neglected by the Eurasian caravans from the east.

Maritime redistribution.

What was the proportion of spices redistributed across Europe from Antwerp by way of sea as oppose to land during the first half of the sixteenth century? I shall attempt to answer this question with respect to the quantities sent on to Danzig and the Baltic ports from Antwerp and contrast this with the volumes arriving on the same Polish market by the overland routes we have sketched hereto. Contrast, for these were two fundamentally different systems, the Hanse actively banning the transit of goods belonging to Upper German firms in its member cities.⁵²

It is a general historical commonplace that Baltic ports enjoyed a considerable trade surplus over western counterparts from the fifteenth century and for much of the early modern period, and that structural shifts over the course of the sixteenth century brought the Baltic

⁴⁹ Marian GRYZ, 'Die Rolle der Stadt Poznań im Innen- und Aussenhandel bis Ende des XVII Jahrhunderts', in Ingomar BOG, *Der Außenhandel Mitteleuropas, 1450-1650*, (1972), 118.

⁵⁰ David Gershon HUNDERT, 'The Role of the Jews in Commerce in Early Modern Poland-Lithuania', *Journal of European Economic History*, 16 (2), (1987), 245-275.; contemporary descriptions by Sebastian MICZYNSKI, *Zwierciadło Korony Polskiej Urazy Cieżkie, y utrapienia Wielkie, Ktore ponosi od Żydów Wyrazające Synom Koronnym Na Sejm Walny w Roku Pańskim*, Kraków (1618), 27-32.

⁵¹ see, for example, a preserved list of merchandise from 1577-1582 with the title 'Short description of goods which city Jews and suburban Jews carried to Lvov from Germany, as well as Lvov to the border (i.e. Sniatyn), also to Kamieniec', *Akty grodzkie i ziemskie z czasów Rzeczypospolity*, vol. 10 (1884), #2531 and BALABAN, 'Materyały' in *op. cit.*, 405-6.

to the forefront of the European economy.⁵³ But, although at one time the East Prussians obtained eastern goods from Venice by way of Bruges, and the spice accounts in Bruges between 1419-34 testify to this trend, it seems that it was not until the seventeenth century, or at least not prior to the 1580s, for which date Hroch has demonstrated that the price of spices upon entry into Poland became lower at Danzig than at strategic points on the overland route, that such a phenomenon widely took place and then without the intermediation of the entrepot at Antwerp.⁵⁴ Other sources such as the *Milichbüchlein*, a book of purchases of a Lübecker wholesaler (*Großkaufmann*) brought to light by Fritz Rörig, would corroborate this picture, that in the period we are directly interested in, spices were brought to those Hanseatic cities overland from the fairs at Frankfurt rather than by way of sea.⁵⁵

This consensus has nevertheless been challenged by Samsonowicz, who points to Danzig's detailed (1422 entries) port records for the year 1510; by value, spices amounted to around a quarter of the cargo carried, constituting the third most imported product after fish

⁵³ I. BOG, *Der Außenhandel Mitteleuropas*. ., 1; the literature on the export surplus of Polish ports from the second half of the fifteenth century dates back to N.W. POSTHUMUS, *De Oosterse Handel te Amsterdam*, Leiden (1953) and A. CHRISTENSEN, *Dutch trade in the Baltic around 1600*, Copenhagen (1941). It appears that Dutch ships often made the voyage to Danzig in ballast.

⁵⁴ C. SATTLER, *Die Handelsrechnungen der deutschen Ordens*, Leipzig (1887), 451-522. It seems the primary reason spices made their way east across the Baltic is that war between Poland and the Teutonic order impaired communications between the Baltic coast and the inland centres of Polish trade, F.W. CARTER, *Trade and urban development in Poland*, C.U.P. (1994), 122.

M. HROCH, 'Die Rolle des zentraleuropäischen Handels im Ausgleich der Handelsbilanz zwischen Ost- und Westeuropa, 1550-1650', in I. BOG, *Der Außenhandel Mitteleuropas*. ., (1972). This would seem to be corroborated from micro-studies of foreign trade flows across Polish cities; M. GRYCZ, for example, has suggested that between 1550 and 1665 Poznań's foreign trade swung markedly (from 12-36%) to the north, that is convincingly into the sphere of Danzig's commercial radiation; during the latter decades of the sixteenth century Cracow's imports of foreign goods entering from Wrocław (the overland route from the West) fell and seem to have been substituted by deliveries from Toruń and Danzig. Taken from Table #1, M. GRYCZ, *Handel Poznań, 1550-1655*, Poznań (1964) and GRYCZ 'Die Rolle der Stadt Poznań im Innen- und Aussenhandel bis ende des XVII. Jahrhunderts' in BOG ed., *Der Außenhandel Mitteleuropas*. ., (1972), 113; for Cracow, R. RYBARSKI, *Handel i polityka handlowa Polski w XVI stuleciu*, Poznań (1928), II, 86, 108, 202. For Wrocław price movements, see Marian WOLAŃSKI, *Ceny zboża i jego przetworów oraz owoców i warzyw we Wrocławiu w latach 1506-1618*, Wrocław (1993).

For Portuguese spices on the maritime route to Baltic ports in the period succeeding that in question, see H. KELLENBENZ, 'Der Pfeffermarkt um 1600 und die Hansestädte', *Hansische Geschichtsblätter*, no. 74 (1956); also F. SIEWERT, 'Geschichte und Urkunden der Rigafahrer in Lübeck im 16. und 17. Jahrhundert', *Hansische Geschichtsquellen*, N.F. Bd. I, Berlin (1897).

⁵⁵ Fritz RÖRIG, *Das Einkaufsbüchlein der Nürnberger-Lübecker Milch's auf der Frankfurter Fastenmess des Jahres 1495*, Schleswig-Holsteinische Universitätsgesellschaft Veröffentlichungen, nr. 36, Breslau: Hirt (1931), Tabelle G., 24/5, as cited in NORDMANN, 'Oberdeutschland und die deutsche Hanse', *Pfingstblätter des hansischen Geschichtsvereins*, no. 26, Weimar (1939), 49; concorded by J.-F. ROTH, *Geschichte des Nürnberg-Hankaufs*, Stefan (2001), Portugal and the European spice trade, 1480-1580

and cloth. Ginger, cinnamon, nutmeg, mace, cloves and saffron all figure in the accounts.⁵⁶ But Kieniewicz has convincingly dispelled the significance of such testimony by emphasising how minimal the inflowing quantities were, 11.000 pounds (c. 100 quintals) at the beginning of the sixteenth century rising to 35.000 pounds in 1583, pointing instead, after scouring privileges, customs payments and insurance records, to a more lively aggregate interest in salt, sugar and wine.⁵⁷ If there was nonetheless a trickle, the customs books for Włocławek on the Lower Vistula rarely mention spices being sent on to Krakow during the first half of the sixteenth century, whilst in 1537 a document was sent by Toruń merchants to Gdańsk complaining that Krakow traders were buying pepper in Wrocław and not from them, a theme reiterated in 1544.⁵⁸

But even in the products Kieniewicz brings to the fore, figures reveal the seismic shift that the shipping route to Danzig underwent only at the end of the sixteenth century: from an annual import of 3 tonnes of sugar to as much as 240 in 1620; pepper imports, Jeannin has calculated, jumped ten times between 1538-1634.⁵⁹ The Baltic, then, awaited the Dutch. Even the old Hansard route entailed carrying goods from Lübeck to Hamburg overland and only from there loading them on to ships for the purposes of transport to the south-west.⁶⁰

How can we understand this trend in light of Chaunu's calculations that a metric tonne travelling by sea was on average five to ten times less costly than a cart operating in the best

⁵⁶ Henryk SAMSONOWICZ, 'Le commerce maritime de Gdańsk dans la première moitié du XVIe siècle', *Studia Historiae Oeconomicae*, vol. 9, Poznań (1974), 51. He drew his source material from WAP Gd. (the State Archives of the Voivodship of Gdańsk), 300, 19/10.

⁵⁷ Jan KIENIEWICZ, 'Nouvelles et Marchandises: La Perspective Polonaise des Découvertes Portugaises au XVIe siècle', in *La Découverte, le Portugal et l'Europe, Actes du Colloque*, Fondation Calouste Gulbenkian, Paris (1990), 334.

The calculations concerning the volume of Portuguese spices entering the port of Danzig were taken from the Pfahlkammerbuch of 1506, and for 1510, WAP Gd., 300, 19/9 and 10, as well as Hanserecesse, III/5/43, p. 74 and 76, relating to the losses of Danzig shipping; for 1583, WAP Gd. 300, 19/14. The interest in importing sugar, salt and wine is lifted from WAP Gd., 300, 53/153.

Compare Kieniewicz's conclusions with those of Maria BOGUĆKA, 'Handel Gdańska z Półwyspem Iberjskim w pierwszej połowie XVII wieku', in *Przegląd Historyczny* (1969).

⁵⁸ S. KUTRZEBA, 'Wisła w historii gospodarczej dawnej Rzeczypospolitej Polskiej', *Geografia Wisły*, vol. XI, Warszawa (1921), 43-44, in which analysis is made of the customs books (Księgi celne/Register Thelonei) of Włocławek for the sixteenth century; P. SIMONS ed. *Danziger Inventar*, Munich/Leipzig (1913), doc. no. 1070; Wojewódzkie Archiwum Państwowe w Gdańsku, Missiva 300, 27/18, K. 181 v-182.

⁵⁹ Elzbieta MILEWSKA, *A Pólonia e Portugal: relações ao longo dos séculos*, Warsaw (Agência Polaca Interpress: 1984), 4-5. Sugar worth 40 grzywny was sent from Gdańsk to Kraków in 1538/9. R. RYBARSKI, *Handel i polityka handlowa Polski*., 185; Pierre JEANNIN, 'The Sea Borne and the Overland Trade Routes to Northern Europe in the XVIth and XVIIth Centuries', *Journal of European Economic History*, vol. 11, no. 1, Rome (1982), 49-50.

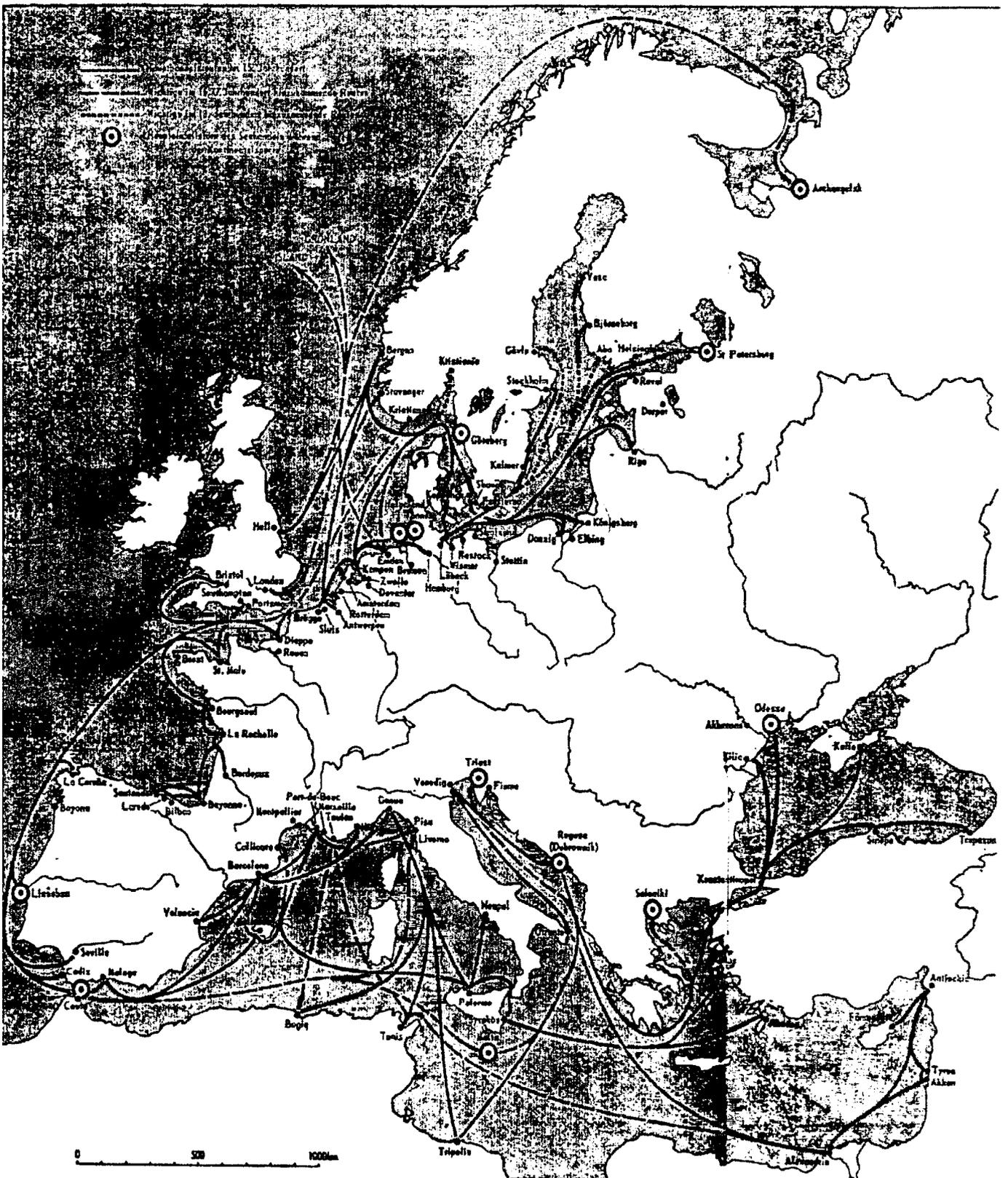
conditions?⁶¹ One might try to look beyond some of the more facile explanations pointing fingers at the insecurity of Baltic waters or sporadic closures of the Danish Sound, for the route was largely operative even on terms offering, from 1512, free passage to the Dutch. We have clear record that 48% of the copper produced in the Fugger held Hungarian mines between 1497 and 1539 was exported to Antwerp via Danzig and Stettin, that is the Baltic/North Sea route *par excellence*.⁶² Rather, we might consider other factors; as a light, small and valuable cargo, spices could afford to be sent directly to central European markets via the overland route, which could in addition take advantage of a Germany more economically integrated than was the case for the long and politically troubled seventeenth century.

⁶¹ referred to by Bertolomé BENNASSAR, 'A função do comércio e a teoria dos círculos de comunicação', in P. LÉON ed. *História Económica e Social do Mundo*, vol. I, t. II, 423.

⁶² Halikowski-Smith, Stefan (2004) Portugal and the European spice trade, 1480-1580, III Band, II Teilband, 1091. *Handbuch der Bayerischen Geschichte*, ed. Max Spindler, Munich (1979), European University Institute DOI: 10.2870/92585



Map 4. European maritime redistribution.



KELLENBENZ, Hermann. 'Landverkehr, Fluss- und Seeschifffahrt im Europäischen Handel', *Actes du Septième Colloque International d'Histoire Maritime*, Vienna (1965), 152 ff..

6. TYPES OF SALE: A HIERARCHY OF TRADE?

6.1. Sales by contract.

In what follows, contracts drawn up between the Portuguese Crown and sub-contractors responsible for re-exporting spices to the European market shall be examined for the period that interests us. For the sake of narrative coherence, it is necessary to contextualise these contracts, what I had hoped initially to achieve in a chronological structure, though the demands of the wider picture insisted rather that they be understood from the perspective of the different consortia that were ranged against the Portuguese Crown and that were chiefly but not exclusively operating along national or confessional lines, at least over the course of the first half of the century. This in some ways pre-establishes the determinants on which analysis of the trading relationship shall follow in Chapter 7 - by nationality - but, as the structuring of Marques Almeida's analysis of the spice trade would confirm, there seems little other meaningful way forward.¹

The Italian consortium, principally the Affaitati & Giraldi.

The first big spice re-export contract tendered by the Portuguese ran from 1508 until 1514 and, like many that were to follow, was taken on by the Affaitati consortium. Azevedo has stated that, on the basis that the entire cargoes from Jorge de Aguiar's *San Salvador* and *Santa Maria* were turned over to the Affaitati in 1508, the contract was exclusive, though other records testify to shipments of pepper from Lisbon under the period of contract in the name of the Fugger (*Focker*), consignments in the hands of the de Haro group and sales via auction to the Frescobaldi of Antwerp.² The Portuguese quittance records, the *cartas de quitação*, however, bear testimony to the fact that the 1508 contract was no dead letter: 117,004,880 *reais* worth of pepper (amounting to circa 13,272 quintals) were turned over to the Lafeitate (the Portuguese transliteration of Affaitati) between 1508-14.³ Before the expiry of this contract, a new one was signed on 10 June 1513 to run for a further three years, with

¹ António Auguste Marques de ALMEIDA, *O Eixo Lisboa-Antuérpia. Capitais e capitalistas no comércio da especiaria (1501-49). Aproximação a um estudo de Geofinança*, Fac. de Letras, Universidade de Lisboa (1989), and published by edição Cosmos (1993).

² J. Lúcio de AZEVEDO, *Epocas de Portugal Económico*, (3 ed., first in 1928, 98. Misquoted, elsewhere in text - trace original; for pepper shipments in the name of the Fugger, see R. DOEHAERD, *Études Anversoises*. ., (1963), vol. III, doc. 3642.

³ Halikowski Smith, Stefan (2001). Portugal and the European spice trade, 1480-1580. *Cartas de quitação*, no. 173, published in FREIRE, *Noúcias da Feitoria de Flandres*, Lisboa (1920), 86. DOI: 10.2870/92585

the sum of 6000 quintals of pepper (2000 p.a.) to be handed over by João de Pina, treasurer at the Casa da India for the price of 22 cruzados per quintal.⁴ In fact, we would do well to state from the outset how the Affaitati stand alone right through the period under examination as consistently the most prominent sub-contractors of the spice trade and family of affairs favoured by the Portuguese Crown, which caused the Spanish ambassador Lope Hurtado to declare at one point in his correspondence with the Emperor 'Here they can't do anything good without him' (*Acá no pueden hazer cosa buena sin el*).⁵

The Affaitati, like many other Italian merchant banking companies, had a trading history with the Portuguese Crown, having previously invested as passive outfitters (*armadores*) in the early Portuguese fleets to the Indies and secured profitable returns of spices. A trading agency had been set up in Lisbon under João Francisco from early on, largely autonomous of the seat of the family company in Cremona. Initially, at least, the conspicuous Florentine merchants Antonio and Filippo Gualterotti, who alongside the Frescobaldi were amongst the first large Italian business enterprises to move to Antwerp in 1507, seem to have been the active representatives of Giovan Francesco Affaitati in the Low Countries (*o feitor de, per comysam do joam francisquo*), though the Gualterotti also operated in their own right. In any case, regular payments were made out to Gualterotti by the Portuguese Crown factor in Antwerp for copper deliveries made on Giovan Francesco's instruction.⁶ More significantly, perhaps, the Gualterotti seem even to have put up the company money for investment in the early East Indies fleets; and another member of the family, Girolamo, obtained the farm of the *Sewisshe tol* from Brussels on all ships navigating the Honte for a period from around 1509.⁷ Despite the family company's alleged bankruptcy, which on closer inspection appears to have consisted of the death of Filippo and the voluntary liquidation of his son in 1523, a Francisco Gualterotti is described as *procurateur* of the Affaitati firm in Bruges as late as 1547.⁸ It is not clear, then, what impact the bankruptcy had

⁴ A.N.T.T., C.C., I, m. 13, doc. 6. The King explicitly gave his seal of approval (*alvará*) to the deal.

⁵ Archivo General de Simancas, Madrid, Estado, Legajo 368, doc. 173.

⁶ A.N.T.T., C.C. pte. I, m. 18, doc. 122; published in *A.H.P.*, t. VI, doc. LIV, 322 ff.

⁷ H. KELLENBENZ, in *Handbuch der Europäischen Wirtschafts- und Sozialgeschichte*, 90; the Frescobaldi's toll collections are complained about by the English Merchant Adventurers in H.J. SMIT, *Bronnen tot de geschiedenis van den handel met Engeland, Schotland en Ierland*, S'Gravenhage (1942-50), no. 383-4.

⁸ J. DENUCÉ, *Inventaire des Affaitati, banquiers italiens à Anvers de l'année 1568*, Antwerp: de Sikkell, (1934), section #7, 52, from Sententien Civile 1546-47, 61v, no. 1, Archives Communales, Bruges. H. KELLENBENZ, in *Handbuch der Europäischen Wirtschafts- und Sozialgeschichte* (Klett-Cotta), 90 prefers to describe the Gualterotti's conjunction with the Affaitati as *zeitweilig* (temporarily) rather than 'initially'.
Halikowski Smith, Stefan (2001). Portugal and the European spice trade, 1480-1580. European University Institute. DOI: 10.2870/92585

on the Gualterotti's business relationship with the Affaitati. At the same time, the list of merchants engaged in the trade between Antwerp and Iberia in 1553-1554 reveals one Juan Battista Affaitadi but no mention of Gualterotti.⁹

Another Antwerp-based Italian trading family with whom the Affaitati on occasion operated in the spice trade were the Frescobaldi, whom documentation of 1517 refers to as *arrematadores de especiarias* (auction buyers of spices) since 1511, and whom we know bought limited quantities of ginger and malagueta from the Portuguese Crown.¹⁰ Their connection to the Affaitati, however, seems to have been less direct than that with the Gualterotti, with whom investments were made in the first armadas sailing for the Indies. But like the Gualterotti, the Frescobaldi fell victim to bankruptcy in 1518 on money lent amongst others to King Henry VIII.¹¹

In fact, the Affaitati seem frequently to have realigned their composition and business partners. From 1527, the Giraldi, whose head Lucas had been in Lisbon since 1515 at least, were closely tied to the Lisbon branch of the Affaitati. In his capacity as *procurador*, Lucas was encharged with negotiating sugar contracts, both with the Capellani of Madeira and the Portuguese Crown.¹² Thirty years later Lucas was still operating in his capacity as *correspondant* to the Affaitati in Lisbon, even though the company was working primarily in conjunction with other groups, the New Christians, and particularly Diogo Mendes (see below), whose obligations the Affaitati apparently assumed along with Lucas Giraldi at the time of the trial in 1533.¹³ Only the year before, Giovan Carlo Affaitati, in league with Mendes, had bought in one straight consignment from the Crown the massive sum of

⁹ Rodriguez PEREZ, 'Salido de la villa de Enveres para España e Portugal e otras partes e an pagado dos per ciento', (1 January 1553 - end of June 1554), Archives generales du Royaume à Bruxelles, fonds de la Chambre des Comptes, série cartons (dossiers), carton no. 326 (Anvers). L.V.D. ESSEN, *Contribution à l'Histoire du Port d'Anvers et du Commerce d'Exportation des Pays-Bas vers l'Espagne et le Portugal à l'époque de Charles Quint (1553-4)*, Antwerp (1921), 17.

¹⁰ letter of Rui Fernandes, 24 March 1517, published as doc. XI in BARATA, *Rui Fernandes de Almada*, (1971).

¹¹ J. WEGG, *Antwerp, 1477-1559*, London (1914), 183-7.

¹² V. RAU, *Um grande mercador-banqueiro italiano em Portugal: Lucas Giraldi*, sep. de 'Estudos Italianos em Portugal', no. 24, Lisbon (1965); Giovan Francesco AFFAITATI, entry in *Dizionario Biografico Italiano*, 351 (1960).

¹³ DENUCÉ, *Inventaire...*, 22. Affaitati and Giraldi are the two merchants mentioned as drug contractors in the Baers report cited below. In any case, either Giraldi pulled out or the whole contract fell through in its own right, for a little later João de Montprat is recorded as complaining (of Lucas): 'hizo tanto con el favor que tuvo que por muy poca cosa que no importava nada, se serro el contrato con elle e sus compañeros', Gaveta 15, maço 17, doc. 11 and V. RAU, *Um grande mercador-banqueiro italiano em Portugal: Lucas Giraldi*, separata de 'Estudos Italianos em Portugal', no. 24, Lisbon (1965), 6.

12.000.000 ducats worth of nutmeg, cloves, ginger and pepper in an exclusive deal.¹⁴ In 1551 the Antwerp, Spanish and Portuguese branches teamed up with the Pinelli and Spinola of Genoa to buy in concert, although the Affaitati's business relationship with the New Christians had not dissipated and, as official spice contractors, were together reinstated in 1559 alongside Antonio and Jérôme del Rio, the heirs of Luis Perez and Antonio de Salazar, all operating out of Antwerp.¹⁵ Under Juan Battista, later head of the firm, the Lisbon branch steadily devolved its family interest and by the time of the Inventory in 1568 only 12 of the 97 constituent parts were to be held by Jean-Charles' heirs, 50 were to go to Lucas Giraldi, 23 to Giraldi's son Nicolas, 11 parts to the Bardi and 1 to a certain Luigi Sangiuliano.¹⁶

That the Affaitati's business operations seem from the Inventory's current account to have been fairly exclusive of contact with the German merchant world apart from the modest sum of 2,916 Flemish pounds owing from dealings regarding cinnamon with Jacomo (Jakob) Welsler can't have been strictly true: the repeated contracts the Affaitati made with the Portuguese Crown for copper deliveries must have brought them into direct negotiation with High German suppliers.¹⁷ But, on the whole the shifting composition of the Affaitati consortium excluded northern European merchants, and this then seems to have been one inescapable features of Portugal's European spice trade in the period under investigation, if things were to change with the ambitious international projects that immediately succeeded Union with the Spanish Crown.¹⁸

Where was the Affaitati company strategy, as far as the European spice trade was concerned, directed from? Denucé tells us to our surprise that latterly the Affaitati company moved its operations to Antwerp, and this may have been on Giovan Carlo's move from Lisbon to the Low Countries in 1514. But this clearly did not slacken the rapport the Affaitati had built up with the Portuguese Crown, as João Francisco continued to conduct lively affairs

¹⁴ V. RAU, *Um grande mercador-banqueiro italiano em Portugal*, 4 ff.; also J. DENUCÉ, *Inventaire des Affaitadi*. ., 25.

¹⁵ Grand Livre A, fo. 622, 30 April 1551; GORIS, *Étude sur les colonies marchandes meridionales*., 202.

¹⁶ J. B. assumed greater responsibilities within the firm on his brother's being raised into the nobility; he took over only on his brother's death. DENUCÉ, *Inventaire des Affaitadi*. ., 8.

¹⁷ for example, contract made June 14, 1514, Corpo Cronológico, pte. I, maço 24, doc. 89; another with payment made September 1515, C.C. pte. I, m. 18, doc. 10; C.C. pte I, m. 19, doc. 111, published in *A.H.P.*, t. VII. doc. LV, 323 ff.

¹⁸ see for example, the Rott contract of 1576, the six-year contract signed by Philip II on 29 November, 1585, and its renewal, a further five-year contract signed in 1591 and which addressed Italian, High German and New Christian participants. Hermann KELLENBENZ, *Autour de 1600: le commerce du poivre des Fugger et le marché internationale du poivre*. ., and *Lettres marchandes d'Anvers*. ., letter from Varrón to Ruiz, 14 May 1591, Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580

with the Crown until his death in 1529. Thereafter, the Affaitati do indeed seem to have directed their attentions pertaining to the spice trade from Antwerp in league with the New Christians, though not without a well established mesh of business contacts in Lisbon. Even after Juan Battista's succession in 1555, the company assets drawn up for the Inventory demonstrate the continued significance of the *filiale* in Lisbon, which constituted thirty parts of a total of 130.¹⁹ But by this time, the principal Italian firm operating in Lisbon was that of the Giraldi, who as we have seen from the 1568 Affaitati inventory, took over the major share of Affaitati business in imperial trade. For some time Lucas had concentrated on the *trato de Asia*, having himself captained a nau in the Indies fleet of Sousa Tavares in 1540, and won in league with Diogo de Castro one of the first sub-contracting agreements for the *trato de Asia* that ran between July 1557 and December 1562 by which they undertook to transport 30-40.000 quintals of pepper annually.²⁰

The gradual retraction of the Affaitati concern to Antwerp did not mean the abandonment of large-scale spice contracts with the Portuguese Crown. As late as 1548 Giovan Carlo was advancing three million ducats on 90.000 quintals of spices, an enormous sum that may have had something to do with the close of trading through the Crown Feitoria in Antwerp. On August 24, 1555, the firm acquired another 110.000 cantars or 560.867 *livres* of pepper at a price of 65.702 flemish pounds; and more came along on November 18 of the same year.²¹ In 1559, the Affaitati appear in a consortium next to the Giraldi, in whose hands the *trato de Asia* was operating, and the del Rio.²² Even at the time of the Inventory in 1566 pepper contracts with the Portuguese crown remained outstanding, payments to be made by *juros* or else letters of exchange redeemable at the Spanish fairs. In 1572, a fleet of spices directed to the attention of the Affaitati & Co. in Antwerp was intercepted by the seabeggars at Flushing.²³

High German merchant capitalists.

High German houses of commerce emerged alongside the handful of Italian contractors and in many ways offered a natural partnership with the Portuguese. Theirs were the resources

¹⁹ Jean DELUMEAU, *La Civilisation de la Renaissance*, Paris, (1967), 256.

²⁰ A.N.T.T., Col. de São Vicente, vol. III, f. 227.

²¹ DENUCÉ, *Inventaire des Affaitati*. . (1934), 21, 22 and 25.

²² A. CASTRO, *História Económica de Portugal*, 175.

²³ Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
J. MATERNE, in C.C.F.E. 177.

that the Portuguese needed for both the maintenance of Empire and the initial purchase of those imperial goods from whose carriage the Portuguese could exercise a profit.²⁴ These were above all the precious metals, copper and silver, from which a select group of German family firms, especially that of the Fuggers, who had leased the Hungarian mines from 1495 until 1545, but also the Hochstetter, were able to forge a commercial monopoly through instruments such as market-sharing and price controls.²⁵ The High Germans, too, were the great trading re-distributors of central Europe as we saw in Chapter 5, taking advantage of a strategic geographical situation to dominate supply networks into this vast region.²⁶ These German distributive networks had been running to Flanders for some considerable time, relaying metals from the 1460s and picking up English cloth in return; but this had been the case even before this, ever since the merchants of Cologne had come to meet the annual arrival of the Venetian *galere* at the port of Bruges.²⁷ The idea that most of the big German firms didn't even have an acting office in Antwerp until the end of the first decade of the sixteenth century seems to be quite wrong.²⁸ The direction of Azevedo's argument, however, seems to want to indicate that the Germans were slow to react to Portuguese imperial opportunities, and in this perhaps he is right. The first mission to the Portuguese court, that of Seiz and Loewenstein, only took place on 13 February 1503, and the first contract signed with Lucas Rem, an agent of the Welsers, if representative in some degree to the interests of

²⁴ K. DETTLING, *Der Metallhandel Nürnbergs*, Mitteilungen des Vereins für Geschichte der Stadt Nürnberg, 27, (1928), pp. 97-241.

²⁵ *Handbuch der deutschen Geschichte*, ed. Brandt, Weher & Just, Konstanz (1956), Bd. II/I, section entitled 'Der deutsche Frühkapitalismus', esp. 95. Amongst the most instructive sources on the copper industry for this period is a letter by Rui Fernandes d'Almeida, dated 9 December 1519, in which he describes the various sources of market supply, C.C., pt. I, m. 25, doc. 76 and BARATA, *Rui Fernandes de Almeida*., (1967), 211 ff.

²⁶ cf. 'Niederlassungen und Fernverbindungen der Fugger und Welser', map in *Handbuch der Deutschen Wirtschafts und Sozial- Geschichte*, ed. Hermann Aubin & Wolfgang Zorn, (1971), Band I, 450-1.

²⁷ for Germans active in Brabant at the beginning of the fifteenth century, see H. AMMANN, *Der Hessische Raum*, 15-19. For early trade links with Germany, BONENFANT, *Route de Bruges à Cologne*, 446-447.

²⁸ J.L. de AZEVEDO, *Epocas de Portugal económico*., 114, instructs us that the Hochstetter only shifted their head operations (*a sede*) to Antwerp in 1498, followed by the Ravensburgers in 1507, the Welsers in 1508 and the Fuggers in 1515. But Azevedo doesn't seem to understand the command structure of the German firm, which conducted operations from the home town (see section 7.3.). What Azevedo mistakenly calls a *sede* is corrected by EHRENBURG, with reference to the Fugger Company, who describes the purchase in Antwerp in 1508 of a 'house to itself', *Capital and Finance*., 71. Other Portuguese documents, such as one of 1522 for example, refer more appropriately to the Herwart company's *casa* in Antwerp. For fuller details of the Fugger factory in Antwerp, see Augustin THYS, *Historiek der straten en openbare plaaiszen van Antwerpen*, 2nd edition, Antwerpen: Kennes, (1893), 548 ff. The Ravensburger agent Hans Hillenson noted in 1507 that Antwerp 'ist die Stadt hier voll von Oberländern. wollen alle hier reich werden. Höchstetter, Welser, Fugger haben soeben große Häuser gekauft', cited in Aloys SCHULTE, *Geschichte der Großen Ravensburger Handelsgesellschaft, 1380-1530*, Wiesbaden, 1964, 415. Portugal and the European spice trade, 1480-1580

the Fugger and Hochstetter, on 1 August 1504.²⁹

From the beginning, for reasons we shall analyse in Chapter 7, relations between the two parties can be characterised by ambivalence produced by in clarity, suspicion on the part of the Crown, and misunderstanding. Seiz and Loewenstein came away from their audience with the Crown with an unprecedented *carta de privilégios*, but having consequently sent three ships from Antwerp, the German merchants found they were not free to trade in the Indies but obliged to buy directly from the Portuguese *feitores* at officially determined prices.³⁰ The Welser agents who preceded Lucas Rem in paying court to the Crown in early 1504 with a view to investment in the Lopo Soares fleet and the sending of two representatives to India was summarily refused, only for the decision to be overturned later that year.

In any case, a trading community of Upper Germans, which had existed in Lisbon from the end of the fifteenth century, sprang up with the influx of commercial opportunities and the signing of a number of benevolent privileges favouring south German firms in 1503 and 1504. From the flurry of commercial activity in Antwerp, the top merchant capitalist families moved on to Lisbon where, for example, it appears the the Fugger were buying from 1509, even if it is not clear in what form.³¹ The first firm contracts to involve spices seem to be that for a sum of 400 (III⁶) quintals signed with Fernam Chamorro in October 1510, and a *carta missiva* of 1 January 1512 committing the King again to hand over to Pero Encuria and Fernão Chamorro, agents of German firms.³² We have evidence of the Fugger exporting spices from Lisbon during the period of sub-contract to the Affaitati in 1513, investigating possibilities for a *sobrepartido* (a follow-up deal) according to a letter of Tomé Lopes dated 16 February 1513, and then a contract with the Crown for an annual copper delivery equivalent of 15.000 quintals of pepper, which was negotiated but apparently not concluded with the Fugger in 1515.³³

What might we be tempted to conclude? First, perhaps, that the Affaitati contracts of

²⁹ K. HÄBLER, *Die überseeische Unternehmungen*. ., 16; *Tagebuch des Lucas Rem aus den Jahren 1494-1541*, ed. R. Greiff, Jahresbericht des historischen Kreisvereins für Schwaben und Neuburg, no. 27, Augsburg (1861), 8. Initially, it seems, the Germans were more interested in exploring the possibilities of trading directly with the Levant through Genoa, Marino SANUTO, *I Diarii*. ., 1 c., 28.

³⁰ see Manuel Nunes DIAS, *O Capitalismo Monarquico Portugues*, Coimbra (1963-64), vol. II, 570.

³¹ K. HÄBLER, *Die Geschichte der Fuggerschen Handlung in Spanien*, Weimar (1897), 22-24.

³² A.N.T.F. Lisbon. C.C. pte. I, m. 9, doc. 78.

³³ R. DOEHAERD, *Études Anversoises*. ., 1963, vol. III, doc. 3642; letter from T. Lopes at C.C., pte 1a, m. 12, doc. 77, and another dated 23 May, 1515, at C.C., pte. I, m. 17, doc. 126.

1508 and 1513 do not seem to have been exclusive, for we have evidence that both de Haro and the Fuggers were exporting pepper in this period. This would seem to be confirmed by the privilege of August 30 of that year arrogated to all Germans living in Lisbon, and which set out the pepper prices issuing from the Casa da Índia.³⁴ But that such a favourable privilege was formulated at all must surely be evidence of strong German presence and lobbying in Lisbon, which is only confounded by the contractual provision of 1512 stipulating that pepper be handed over to Chamorro and Encuria, clearly not Germans regardless of how thickly German names were rendered into Portuguese.

The second decade of the sixteenth century seems to have been one of considerable experimentation in Luso-German commercial relations despite the bitter legacy from the previous decade. It was marked by considerable interest from both sides, though the 1509 privilege, despite ever wider freedoms of trade and exemptions from excise duties, effectively kept the door closed on involvement in the wider imperial enterprise.³⁵ It was the Portuguese who perhaps started to entertain notions of a strong collaboration with the Germans, coming to appreciate that German firms were perhaps better able than purely formal or financially leaning contractors like the Affaitati to offer and facilitate return payments in kind, particularly precious and manufactured metals (typically brass and copper *manilhas*, of which 100.000 were contracted in 1504) indispensable for imperial trade and that the Portuguese King was unable to buy at Lisbon.³⁶ Theirs too were the weapon manufactures whose significant import into Portugal via Antwerp has not gone unnoticed by historians.³⁷ Every contract from this period that I have consulted explicitly relates that spices were merely reciprocal payment issued by the Casa da Índia for metal goods already delivered. In 1517, for example, it was agreed that four shipments made to Lisbon, each of 12.000 quintals of copper, were to be repaid immediately in pepper.³⁸

The Portuguese, it seems were keen to bolster copper-for-spice contracts by securing longer-term agreements promising greater security and regularity of delivery, even at the

³⁴ A.H.P., ed. Freire, vol. I, (1903), 284, carta 79.

³⁵ the privilege of 1509 is reproduced in J. DENUCÉ, *Privilèges commerciaux*, ., 317; see also the *alvará* of December 1517 in SANTARÉM, *Quadro elementar das relações políticas e diplomáticas de Portugal*, ., (1843), sec. VIII, vol. I, 'franqueando aos Allemães a entrada em Lisboa de todo a taboado de costado de navios, sem direito algum'.

³⁶ see Tomé Lopes, Antwerp, 28 February, 1504. A.N.T.T., C.C., p. I, m. 4, doc. 63.

³⁷ J.-A. GORIS, *Etudes sur les colonies marchandes méridionales*, 240 ff. and *Lettres marchandes d'Anvers*, ., I, 81.

³⁸ Halikowski Smith, Stefan (2001). Portugal and the European spice trade, 1480-1580
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expense of traditional suppliers like the Affaitati, who had diligently supplied thereto.³⁹ Lourenço Lopes reminded the King in July 1517: ‘And I remind Your Highness that the Fugger (*focar*) and the Hochstetter (*osteter*) go to great lengths to have this copper and if Your Highness doesn’t have any, they certainly will’.⁴⁰ This then, it seems, was the drift of Tomé Lopes’ visit to southern Germany at the beginning of 1515, and who reported enthusiastically on his meeting with Jacob Felinguar, Chief Treasurer of the German Emperor, Maximilian, and who had astonished Lopes with the wealth of the imperial mines.⁴¹ Lopes had been put in touch with the Fuggers consequently, who were the principal leasees of the mines, and who were apparently keen to commit themselves to the sale of 15.000 quintals of copper for a period of six years in return for the exchange of pepper ‘from the coming year’s armada’ (*pera armada do ano que vem*). Lopes, according to Kellenbenz playing down the Portuguese Crown’s needs, asked for 5-6.000 quintals of copper immediately and an understanding to enlarge the agreement.⁴²

In the end, however, nothing came of it; Lopes writes ‘esteuemos em muyta pratica sem concrusam’ - it seems even the provisioning of the initial 6000 quintals of copper was problematic.⁴³ A letter of 29 May, 1515, from Lourenço Lopes at Antwerp to D. Manuel nevertheless suggests that something was salvaged, probably from dealing with lesser cartels: pepper had been sold under a six-month contract at 20.5 and 22 d., and German ships were to set sail for Lisbon carrying silver.⁴⁴ Otherwise, the Portuguese Crown fell back on its traditional suppliers, namely the Affaitati. Giovan Francesco was asked to marshall his connections in Antwerp to get hold of *o cobre que pudesse reunir* on the King’s receiving news of the failure of Lopes’ mission. This amounted to 6349 quintals, 3 arrobas and 23

³⁹ see, for example, C.C. pte I, m. 24, doc. 89; pte. I, m. 18, doc. 10; pte. I, m. 19, doc. 111 (published in *A.H.P.*, t. VII, doc. LV, 323 ff.). It is not clear precisely how the Affaitati obtained their copper supplies for the Portuguese Crown, but they must have made independent contracts with the Germans, like the de Haro in the run up to 1527 for a contract for the supply of 5827 *libras* of copper. See J. STRIEDER, *Inventar der Firma Fugger*, Tübingen (1905), 79.

⁴⁰ ‘E lembro a vossa alteza que o focar e o osteter amdand muyto pera euer este cobre e se a vossa alteza nã a, certo elles o aueram’.

⁴¹ letter of 4 May, 1515, from Augsburg. C.C., pte. I, m. 17, docs. 126 & 127.

⁴² H. KELLENBENZ, ‘Briefe über Pfeffer und Kupfer’, in Erich HASSINGER, J. Heinz MÜLLER & Hugo OTT ed. *Geschichte. Wirtschaft. Gesellschaft. Festschrift für Clemens Bauer zum 75. Geburtstag*, Berlin (1974), 209.

⁴³ letter of Tomé Lopes. 23 March, 1515, C.C., pte. I, m. 17, doc. 126.

⁴⁴ Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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arráteis. It was repaid in currency in two payments.⁴⁵ A long-term agreement was subsequently concluded with the Affaitati, identical to that sought for in Germany, that is an annual delivery for a run of five years of 12.000 quintals at the fixed price of 28 soldos (*sous*) a quintal, about 4.2 cruzados; Filippo Gualterotti, acting for the Affaitati in Antwerp, was to deliver 10,716 quintals of copper for 1516 forthwith to the Portuguese feitor Sylvestre Nunes.

It is unclear why the contract was dissolved after the passage of only a year: I had initially thought that it stemmed from an inability on the part of the Affaitati to obtain the requisite copper which, judging from João Francisco's correspondance with Gualterotti, they obtained second-hand from the *Fuclos* or Fugger. But it seems it was the Portuguese King who was dissatisfied with the terms and broke off, and who was thereby penalised with having to pay 30 rather than the 28 *soldos* agreed for the single consignment.⁴⁶ Almada's correspondance suggests that the conjuncture of market circumstances favoured a better deal on pepper 'because the land is scarce in this' (*porque ha terra esta mynguada della.*).⁴⁷ But a smaller contract for 75 bales of ginger went ahead.⁴⁸ In any case, a contract was eventually signed with the Germans in July 1517 for 12.000 quintals of pepper, with payment to be made at the Casa da India in silver and copper, though there is also some doubt here as to whether the terms of the contract were ever met: in 1518 Godinho signals a spice purchase amounting to 80,000 cruzados in the name of the Affaitati which, at the going rate indicated by Rem, would have amounted to some 3000 quintals.⁴⁹

The Portuguese Crown persisted with its actively lobbying High German commercial interests, despatching Rui Fernandes de Almeida to Germany between September 1519 and February 1520 with the charge to seal contracts 'with lords and economic powers' (*com senhores e potentados económicos*).⁵⁰ But once again negotiations with the Fuggers were difficult, complicated by the fact that pepper was of really no interest to them and could only do their wealth and reputation harm; nor were the contractual conditions they proposed on

⁴⁵ A.N.T.T., C.C. p. 1, m. 18, doc. 10.

⁴⁶ C.C. pte. 1, m. 19, doc. 111.; published in *A.H.P.*, t. VII, doc. LV, 323 ff.

⁴⁷ letter from Rui Fernandes de Almeida, February 1517, doc. VII in Maria BARATA, *Rui Fernandes de Almada, diplomata português do século XVI*, (1971).

⁴⁸ C.C., pte. I. m. 9, doc. 133.

⁴⁹ letter from Lourenço Lopes, Antwerp, 7 July 1517; C.C. m. 22, doc. 25, and published in the *A.H.P.*, t. VII, doc. LVI, 326. V.M. GODINHO, cited by KELLENBENZ, *Briefe über Pfeffer und Kupfer.* ., 214.

⁵⁰ cited in Maria do Rosário Themudo BARATA, 'Epistolografia de Rui Fernandes de Almeida. Duas Cartas de Antuérpia (1519 e Março 1520)', in vol. I, *Portugaliae Historica*, Lisbon (1973), 293. Halkowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580. European University Institute. DOI: 10.2870/92585

copper ultimately acceptable to Dom Manuel, and things were postponed.⁵¹ On this occasion, Fernandes snatched a deal with the Hochstetter and another, amounting to 70.000 cruzados, with the company of Lucas Rem, whose factor Georg Herwart (Erberte) had further agreed to buy cinnamon and cloves from the King in Lisbon.⁵² But despite forward payments the King reneged on this agreement, and concluded a *partido* with Jam Francisco and 'Janym Becudo' from the Affaitati consortium, and Fernandes felt obliged to write angrily to the King that he could not go ahead with this even if the Italians offered 6 to 10 cruzados more.⁵³

This familiar train of events was repeated in 1527: the Portuguese King had again approached the High German firms for contracts, negotiations again broke down and the Italians were called in, this time not without German rancour. Rui Fernandes no doubt mollifies their feelings when he writes to his King that: 'The greatest of these German companies are ridden with envy for being left out of the contract. . they considered that there was nobody to deal with except themselves; they had come to an agreement amongst themselves that they would sell to Your Highness on their terms'.⁵⁴

What was the cause of all these broken contracts? At face surface, they quarrelled principally about the terms. Rui Fernandes describes in a letter of 26 April 1521 how the Fugger wouldn't accept the offer of 27 *soldos* a quintal from the Portuguese for copper, and wanted 28 'porque lhe custava muito mais que os tempos passados', even when the price of Hanseatic copper was typically 26. Even when Rui Fernandes finally ceded to the asking price of 28 s., the Fuggers withdrew.⁵⁵ The Fugger, furthermore, held the Portuguese to paying for copper supplies in nothing but 'dinheiro de contado' and, as Rui Fernandes reports, for accounts to be settled promptly ('queriam logou o dinheiro'). Indeed, when it came to discussing specifically the pepper rather than copper contracts, the Portuguese Crown was even prepared to cede the spices in advance: 'and as far as the payment for the pepper

⁵¹ letter no. 1, dated 4 February 1520, Antwerp, in BARATA, *Epistolografia de Rui Fernandes de Almada*., (1973), 294.

⁵² the cinnamon and clove contract did not end happily, for the Treasurer of the Casa da Índia was instructed to compensate Herwart with 200 quintals of pepper 'pela perda que tiveram', A.N.T.T., C.C., pte. I, m. 25, doc. 119.

⁵³ news of the *partido* with the Italians was presented to Fernandes by Lucas Rem, who had received a letter from Herwart dated 22 October, H. KELLENBENZ, *Briefe über Pfeffer und Kupfer*., 217.

⁵⁴ 'Item que vão cá grandes invejas entre estas principais destas companhias de alemães, porque não têm parte no contrato.. eles cuidavam que não havia ninguém para contratar senão eles; tinham todos feito juramento entre eles de fazerem vender a V.A. às suas vontades, etc.', letter from Rui Fernandes to Dom João III, dated January 23, 1527. Published in *A.H.P.*, t. 8, 23.

⁵⁵ 'Aqui senhor, como vosa alteza mandou lha concertar o contrato com o focoro com as condições do pasado por esse preço de 27 soldos e nom o quys tomar', C.C., I, m. 27, doc. 3; *A.H.P.*, loc. I, 207-66
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contract is concerned, I have spent ages with the Fugger bringing it down to 24 cruzados and offering six to eight months, even a year before settling up, and still they don't want it under any circumstance'.⁵⁶

So, trading with the Fugger was a difficult proposition, a privilege even; indeed, they almost certainly exploited their privileged access to the regular and sizeable stocks of the metals that enticed the Portuguese to keep prices so high. But at the same time Maria do Rosário Barata has dwelt upon the reluctance manifested by the Fugger, hinting at another dimension to the problem, that the Fuggers were sensitive to the wave of protests across Germany against speculation and wanted to avoid being ill thought of (*mal querido*). As Rui Fernandes explains: 'Nobody buys, or even dares to buy, or sends [spices] overland as his own, because if he is seen with 10 sacks it would mean that he has them all'.⁵⁷ Further to that, as we have seen, the nature of the business relationship, the climate of hostility and mistrust only rendered dealings the more fragile.

One of the noticeable features of the contracts signed between the two parties over the first thirty years of the sixteenth century, as we have seen with Encuria and Chamorro, is that the delivery and receipts of goods was made from Lisbon rather than Antwerp, despite the physiognomy of the German firm such as we have described it. On Rui Fernandes de Almeida's commercial visit to the city of Nuremberg in 1519, German interests clamoured for trading rights from Lisbon.⁵⁸ When Stetten concluded a deal for 11.000 quintals of pepper and hundreds of quintals of other spices in 1532, he went to Lisbon and set the terms from that city.⁵⁹

How can we explain this trend towards shifting the locus of exchange from Antwerp to Lisbon? At face appearance the High Germans had nothing to gain beyond the right to arrange their own freight re-export, which, for a land-locked trading community without a fleet readily at its disposal, would not present immediate advantages. Cooperation between

⁵⁶ 'e quanto ao pagamento de tomar pimenta eu tenho já tanto trabalhado com elle o focoro e atee lha trazer a 24 cruzados e lha dar bj e bijj meses dante mão e hum anno e nom querer em nenhum maneira', letter from Rui Fernandes to D. Manuel, Augsburg, 9 December 1519, in C.C. pte. I, m. 25, doc. 76, published in *A.H.P.*, t. VII, doc. XLI, 130.

⁵⁷ 'Non compra nehua nem ousa de a comprar nem mandar as terras como soya porque se lhe vysem x saquas deviam que ha tynha toda', doc. XVII in BARATA, *Rui Fernandes de Almada, diplomata português.* .. (1971).

⁵⁸ M. BARATA, *Rui Fernandes de Almada, diplomata português.* ..(1971), 83.

⁵⁹ see the communication of H. KELLENBENZ in *Actes du V Colloque d'Histoire Maritime*, Lisbon 14-16 September 1961, 262 ff.
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the largely land-travelling southern Germans and the sea-oriented Hansa in the north had never been particularly good. But perhaps the issue of sea-going freight is the wrong place to look; piracy and freebooting in the Atlantic only forced payment to be transferred from assets of the Fugger family in Spain rather than forwarded from Antwerp, such as we find in the terms for a prospective deal to be made in 1530.

Trade from Lisbon offered, nevertheless, strategic advantages: a base to any active participation in Portuguese overseas ventures, and a chance to compete with the Italian companies in Lisbon on an equal footing for contracts. The history of the saffron trade over the fifteenth century in many ways demonstrates how the companies of southern Germany sought to extend their presence from the international fairs of Venice and Milan to a more direct commercial relationship with the producers, whether that be partnership with Italian companies like the Oloferi of Verona, or opening a trading agency in Bari, like the Imhoff did in 1490.⁶⁰ It seems ultimately, then, to have corresponded to some law of capital which the Venetian ambassadors Piero Zen and Tomà Mocenigo summed up as ‘gold travels to where pepper is, and since Portugal has the pepper, Germans go to pick it up at Lisbon’ (*L'arzeno va dove è il piper, et havendo Portogallo il piper, todesschi lo va a tuor a Lisbona*).⁶¹

In fact, the German push to deal from Lisbon was a short-lived phenomenon and, with the slackening of trading relations from the 1520s and little prospect of High German participation in the Portuguese *ultramar*, trade reverted once again to an exchange at Antwerp. Here it was, amongst other things, that the Fugger kept a permanent store of copper.⁶²

Contractual involvement of German parties in the European spice trade seems thereafter to have declined. Part of this was undoubtedly the result of a history of difficult and unrewarding dealings with the Portuguese Crown. But it might also have been due to speculation on German silver, which diminished over the course of the twenties and despite the monetary revaluation of March 1, 1527, silver circulation appeared to be more widespread in the Netherlands, thus facilitating export of this commodity to Portugal by third parties such

⁶⁰ Philippe BRAUNSTEIN, ‘Wirtschaftliche Beziehungen zwischen Nürnberg und Italien im Spätmittelalter’, in *Beiträge zur Wirtschaftsgeschichte Nürnbergs*, Stadtarchiv Nürnberg, (1967), 388, using documents from the Frhrl. v. Imhoffsches Familienarchiv, Germanisches Nationalmuseum Nürnbergs, 28, 4.

⁶¹ Marino SANUTO, *i Diarii* . . . t. LIII, 530-1.

⁶² stocks were estimated at 200.000 guildens’ worth according to the balance sheet of 1527, R. EHRENBERG, *Zeitalter der Fugger*, trans. as *Capital and Finance in the Age of the Renaissance*, New York (1928), 88. Halikowski Smith, Stefan (2001), ‘Portugal and the European Spice trade, 1480-1580’ European University Institute

as the Affaitati.⁶³ Part of this was the growing trend amongst the large German firms to move away from the commercial sector and into credit and public finance. Ehrenberg has demonstrated that the profit margins of the Fugger, who pioneered this shift, were way ahead of more traditional firms, like the Welser, who remained highly dependent on the state of business with Portugal. Over a period of sixteen years the Fugger accounts would suggest an annual average profit of 54.5% compared to the Welsers 9%.⁶⁴ A further consideration: what might the cessation of involvement in the spice trade have to do with the fact that the Fugger were more ready to abandon Lisbon and the Portuguese, and yet maintain the investment in their trading factory at Venice?⁶⁵

But it would be wrong to think that the High German companies no longer traded with the Portuguese for spices. Trade continued, if sporadically, in the guise of simple and readily executable contracts, although its new metrics were directed for the most part, from Antwerp, in time with the steady cessation of trading activity of the colony in Lisbon. With a three-year contract on copper goods (handcuffs, basins, cauldrons etc.) sealed with Erasmus Schetz drawing to a close, a contract of 1548 stipulating the sale of a large quantity of copper and brass domestic manufactures over a three-year term, with a four-fifths payment in spices, was concluded between the Fugger agent Christoff Wolf and the Portuguese feitor, Juan Rebello, at Antwerp. The Germans were charged with sending the goods on to Lisbon at their own risk and cost.⁶⁶ Again in 1551, the Conde da Castanheda, Vedor da Fazenda, courted the Fuggers, this time even offering concessions (*interesses*) within the spice trade to the Lisbon agent. The Portuguese wanted to get their hands on fitted-out ships from the Hanse. But we shouldn't draw too much from this example. On the list of merchants engaged in trade between Antwerp and the Iberian peninsula between 1553-1554 only two Germans are mentioned beyond our friends the Fugger: Bonaventure Bodecker and, if we allow ourselves the license of displacing him from the column made out for Spaniards and Portuguese, Christoval Belzar, a Welser.⁶⁷

⁶³ VAN DER WEE, *The Growth of the Antwerp Market*, vol. II, 159 and #107.

⁶⁴ EHRENBURG, *Capital and Finance*. ., 139.

⁶⁵ A. WEITNAUER, *Venetianischer handel der Fugger nach der Musterbuchhandlung des Matthäeus Schwarz*, München & Leipzig (1931).

⁶⁶ J. STRIEDER, *Aus Antwerpener Notariatsarchiven*. ., XXXII. See also letter from António Marques to the King, Antwerp, 21 January, 1548, C.C., pte. I, m. 80, doc. 16:

⁶⁷ Rodriguez Perez, 'Salido de la villa de Enveres para España e Portugal e otras partes e an pagado dos per cento (1 January 1553 - end of June 1554)' *Archives generales du Royaume à Bruxelles, fonds de la Chambre des Comptes de Brabant (Liosiers)*, carton no. 326 (Anvers). From Léon van der Essen, *Contribution à l'histoire de l'Espagne*, t. 1, p. 267.

Mendes and the New Christians.

The accession of a new King, Dom João III, and the diminution of High German interest in the spice trade saw the rise of certain consortia of New Christians that grew out of Portuguese origins, but exploited the commercial and financial networks established by their correligionists that had resettled in Antwerp following the wave of Iberian expulsions. Perhaps the most influential figure in this group, Diego Mendez, the younger brother of Francisco, had started out at the branch office in Antwerp from its opening in 1512, but had rapidly grasped that the opportunities lay with him rather than the central office in Lisbon. Propelled to one of the great merchandising firms of Europe, with agents operative in almost every capital from London to Constantinople, towards 1525 sources in Antwerp draw our attentions to *contratti di vero monopolio* in the Portuguese spice trade administered by Mendes together with a certain partner, Loys Fernandez, and in association with the Affaitadi, which annually paid the King between 600.000 and 1.200.000 cruzados.⁶⁸

The emergence of the New Christian traders happened to coincide with a period of particularly sensitive relations between the Emperor and the merchant banking community, aggravated by the German Diets insistent haranguing against trading companies for their monopolistic practices, culminating in their being formally charged with the violation of imperial law before the Council of Regency in 1523. Charles found himself in an extremely awkward situation, for it had been these same companies, preeminently the Fuggers, which had helped to secure him the imperial crown in 1517 and had since then propped up his administration with timely loans. It was impossible that these companies' activities be censored and so, with the skilful intercession of the imperial legate, Hannart, the Diet's resolutions were tactically shelved. The public mood in Germany, however, was deeply unsettled and with the latent anger against big business, fuelled by moral invective produced by the *Sittenprediger* hyping up the trading companies as 'the greed and avarice of sinful men', the Emperor was convinced that scapegoats needed to be found to keep the peace. Not for the last time in German history, Charles turned against the Jewish populations, in this instance the New Christians that had resettled on his territories in the Low Countries following expulsion from the Iberian peninsula, and who had rapidly re-established themselves in the upper echelons of international merchant banking. Unlike their High German

l'histoire du port d'Anvers et du commerce d'exportation des Pays-Bas vers l'Espagne et le Portugal à l'époque de Charles Quint, Antwerp: Secelle (1921), 17.

⁶⁸ H. KELLENBENZ, 'Mendes, Diogo', entry in *Dicionário de História de Portugal*, ed. Joel Serrão, Lisbon (1968), vol. III, 15-6. *Dizionario Biografico Italiano* (1960), entry under Affaitati, Giovan Carlo; GORIS, *Etudes sur les colonies portugaises et espagnoles*, 199-.

competitors, Charles owed them nothing. Indeed, there were certain pretexts that would help to justify any punitive action that Charles took. It was widely suspected that the huge fortunes made by these New Christians were being promptly expedited to other members of the clan operating from Salonika, and who were plausibly putting up money for the Ottomans, against whom Charles was vigorously campaigning.

Persecution of these New Christian groups can be traced to Charles' letter from Mantova, dated April 17, 1530, in which he encharged his diplomat Corneille Duplicius Scepperus with the title of supreme commissioner in the pursuit of these New Christians, referred to as *juifs baptisés du Portugal*, across the breadth of his imperial territories. Scepperus, in his turn, nominated on July 19, 1530, from Augsburg, a delegation of *juges extraordinaires* responsible for tracking down New Christians guilty of 'judaising' in the Low Countries under the direction of Jean Vuysthinck d'Utrecht. Their jurisdiction was contested by the Antwerp magistrates, who were understandably loath to indict one of the pre-eminent figures of Antwerp's commercial success, but it was only a matter of time before Mendes was indicted of irregularities in commercial practice, commonly understood as monopolising, fraternising with New Christians and becoming the doctor and adviser of the Sultan himself. In the ensuing investigations related to his protracted trial in 1532, a lot of valuable information can be gleaned concerning New Christian intervention in the spice trade. In the report made by Chrétien Baers, Secretary to the Emperor, in 1534, we are informed of their involvement in the most recent contract:

According to the last contract, concluded in November [1533] with the King of Portugal, the said spices - that is to say the pepper - are all in the hands of the said Jews or New Christians, and the drugs in the hands of two other merchants, in equal portion, charged by them ['the said Jews'] to be brought here, and valued between 200 - 300.000 ducats.⁶⁹

Other sources suggest that the consortium of new Christians under Mendes on occasion bought as much as one million cruzados of spices at Lisbon.⁷⁰ In any case, a number of Mendes' New Christian business associates were named and implicated following the

⁶⁹ 'Selon le dernier contrat, fait en Novembre [1533] avec le Roy de Portugal, les dits especeries sont tous, assçavoir les poivres, ès mains des dits Juyfz ou Nouveaux Chrestiens, et les droguerues ès mains de deux autres marchans, par égale portion, chargiez par eulx pour les mesner par-deça, valissant 2 à 300.000 ducats', Baers' letter of 25 May, 1534, published in *Antwerpsch Archievenblad (Bulletin des Archives d'Anvers)*, ed. P. Genard, J. van den Branden & J. Bisschops, Antwerp, t. VII, 283 alongside the rest of the documentation relating to the trial.

confiscation of his merchant ledgers (*livros de comércio*).⁷¹ We learn that these groups, if not strictly Portuguese (at least not according to sixteenth century criteria), nevertheless benefited from home contacts in Portugal.⁷² Sources informing court prosecutors of the nature of Mendes' business activities draw attention to Diogo Mendes' presence in Antwerp and active management of the spice monopoly in conjunction with Giovan Carlo Affaitati (*ung nommé Jehan Kaerle*) from the New Christian's establishment in the city in 1512, whilst using his brother Francisco Mendes to arrange trans-shipment in Lisbon.⁷³ Together they supervised consortia of between 1-12 merchants, who each put forward up to 12.000 ducats to then sell on in England, France, parts of Germany etc. under collectively agreed conditions (*et davantage mectent des conditions en leur marché*) and in as small a set of quantities as possible (*aux marchans et grossiers par deçà, qui le vendent par onces, livres et autrement*) so that the contractors' power over the market would in no way be challenged (*et ceulx-là ne les peuvent adommager, car ce qu'ilz achatent est peu de chose*). They pushed the King to grant them exclusive rights of purchase, or at least if he was to sell from the Casa da Índia, then not for international re-export to the North (*ilz excluent que l'on ne les amenera en ses pays de par deçà, qu'ils appellent Flandres*).⁷⁴ In other words, the European market was divided between certain operators, Mendes and Affaitati keeping Flanders for themselves (*ilz gardent ce quartier pour eulx*) and from where they masterminded the consortium, which served to spread the risk - the primary bugbear of the spice trade - but also equalise profits. Through such collusion the consortium was able to maintain European prices above a certain level. They were also, in Flanders, well placed to act as intermediaries, amongst other things,

⁷¹ Baers' letter of 25 May, 1534, published in *Antwerpsch Archievenblad*, ed. P. Genard, J. van den Branden & J. Bisschops, Antwerp, t. VII, 283, suggests that the following were *associés juifs* at Antwerp: Antoine Fernandès, Loys Fernandès, Ruy Perus, Diego de Camergo, Steven Perus, Fernande d'Espagne, Emanuel Sarrano, the son of Gonçale Fernandis, Rodrigo de Peris, Diego Does, Loys de Cyvilia and Gabriel de Negro. Other sources cite Sébastian Pimentel, Antonio Lignes, Alexandra Tayda, Eduard Remel, Jean Peris, Emmanuel Madril, Emmanuel Solins, from Albert de Burbure de WESEMBEEK, *La Casa de Portugal d'Anvers. Histoire de trois siècles d'activité*, édition de la revue *Portugal-Belgique*, 11.

⁷² Baers' same letter of 25 May, 1534 points to the involvement of the following Lisbon New Christians: Franco Mendes, brother of Diogo; Antoine Martines and son Noene (Nunes) Henricus; Henrico Noenes and the brothers Alonche de Torris and Diego de Torris; George Vixorda, the same Jorge Lopes Bixorda who leased a trading monopoly with Brasil until around 1515/16; Thomas Sarrano et. al.

⁷³ The nuncio Aléandre reports the arrival of a number of Portuguese Marranos in Antwerp in 1512 ('alguni Maranni'), *Corpus documentorum Inquisitionis pravitatis Neerlandicae*, ed. P. Fredericq, Gent (1902-06), V, 411. Might Mendes have had anything to do with Fernão de Noronha, who was apparently leasee of the Brasil trade and leader of a private company of wealthy Lisbon *conversos* until 1512, precisely the same year Mendes moved to Antwerp?

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⁷⁴ *Antwerpsch Archievenblad*, 'Coppie d'un billet', 215-17.

for metal supplies, which they secured for the Portuguese Crown from the Fugger, sizeable contracts amounting to 200.000 ducats.⁷⁵

Mendes' name was ultimately cleared of the charges brought against him - heresy in the form of judaising, trafficking money and merchandise with Turkey - but only after a period of imprisonment alongside others in his coterie, specifically Antonio Fernandes.⁷⁶ Amongst other things, the personal intercession of Rui Fernandes, the Portuguese factor and ambassador to the imperial court in Brussels, was of great significance, though a cynic might suggest that this was so as to keep Mendes' business running in order to stand a chance of recouping an estimated 200.000 ducats that Mendes had taken on credit from the Feitoria. It seems doubtful that the intervention could have been heartfelt despite the rhetoric - a letter from João III to Charles V dated 29 August 1532 speaks of Mendes as 'a generous creditor in all business matters, and especially ours at the Casa da India. . he is a great servant of mine' - in light of the Portuguese Crown's decision four years later to invite the Inquisition to Portugal, and which promptly provoked a massive and continuous exodus of New Christians from the Iberic peninsula including the flight of Mendes's sister-in-law Beatriz.⁷⁷ In any case, Charles V, faced with a web of international commercial intrigue that implicated many around him and surprised by the force of those gathered for Mendes' defence, was forced to officially discredit both the policies hounding New Christians and that clamping down on monopolies which he himself had seen to fruition:

whichever merchants who contract and trade with Portugal in the purchase and sale of spices. . are not to be pursued, arrested or called in front of my judges or officers in my lands whether for monopoly or illicit contract with the said King or others in the Kingdom of Portugal in connection with the said spicery.⁷⁸

⁷⁵ letter of Ruy Fernandes to the Antwerpschen Stadspensionaris Adriaan Herbouts, 21 July 1532, in *Antwerpsch Archievenblad*, 206-208.

⁷⁶ conditions of Mendes' release stipulated in 'Besluit van Koningin Maria en overeenkomst rakende borgstelling voor Diego Mendez', 7 September 1532, in *Antwerpsch Archievenblad*, 241-7. It is not clear what became of Jean de Belin and Ruy Peres, who were also actively pursued by the law, Albert de BURBURE DE WESEMBEEK, *La Casa de Portugal d'Anvers. Histoire de trois siècles d'activité*, 11.

⁷⁷ letters of 20 and 21 July 1532 from the factor and consul of the Natie van Portugal supported by other *nation* to the Antwerp magistrate, also 'Rekwest van Ruy Fernandez, Factor van Portugal, aan Keizer Karel V', *Antwerpsch Archievenblad*, t. VII, 205-214. GORIS reports that the Portuguese King is to have said 'Puisque tout le pays [la Flandre] par mon ayde a tant gagné, on ne doit désirer que chose aulcune y succède que je perde', *Etudes sur les colonies marchandes méridionales à Anvers*, 200. The letter from João III of 29 August 1532 is in A.G.S. Estado, Legajo 369, doc. 111. In any case, I am not sure Mendes' business continued to run; sources suggest that his pepper and spices were seized. *Antwerpsch Archievenblad*, t. VII, 211, otherwise GORIS, *idem*. 199.

⁷⁸ 'quelconques marchans que contracteront et traficqueront audit Portugal en achat et marchandises d'especeries.. ne puissent estre poursuits, reprins ou demandez par devant mes justices ou officiers en mesdits pays, pour cas de monopole ne contract illicite pour contractz fais avec ledit Roy ou autres au royaume de Oirtugal, touchant ladite especerie', *Antwerpsch Archievenblad*, t. VII, pp. 251. See the letter of protest defending merchants' rights to carry out the kinds of contracts they were always permitted to and sent the Governor of the Low Countries, Adriaen van der Heeren van den Raide in Brabant aengaende den voers contract, *idem*, 286-8.

An imperial order of March 10, 1541, from Brussels confirmed that New Christians could reside in Antwerp together with their families and *alfaias* (objects related to the practise of their religion) and ordered that the 'relevant judiciary authorities' (*justiças competentes*) leave them in peace.⁷⁹ It was reiterated on April 29, 1549.⁸⁰

But was the peace definitive? One of the consortium's partners mentioned in the letter of 1534, Gabriel de Negro, fled Antwerp in 1540 in the midst of a new wave of arrests, and in 1545 a number of Marranos were arrested in Lorraine as they were making their way from Antwerp to Italy.⁸¹

But on the whole, the New Christians seem to have continued much as before, though the price for peace seems to have been a greater public commitment, whether standing as surety for the faltering Hochstetter's financial obligations to the imperial authorities, or personally negotiating Portuguese subsidies to Charles for the conflict between Empire and Turk.⁸² Diogo Mendes is named as one of the merchants trading with Iberia in the Antwerp customs book of June 1554.⁸³ And towards the end of December 1559, an official complaint regarding damaged spices on behalf of 'les contracteurs des especeries' was diplomatically addressed to the Antwerp authorities by Juan Battista Affaitati but spells out his partners as Antoine del Ryo, the heirs of Louis Perez, Antoine Palos, Jean Montingo and Manuel Sanchez.⁸⁴ Much of the influx that swelled the ranks of the Portuguese community in Antwerp in mid-century seems to have been constituted of Portuguese New Christians. This we can ascertain from the list of residents compiled in 1572.⁸⁵ Amongst the greatest international merchant houses and spice contractors of the late sixteenth century, such as the

⁷⁹ C.F.P.A., caixa 4, m. 5, no. 5.

⁸⁰ C.F.P.A., cx. 3, no. 5 - mo. B, no. 17.

⁸¹ with respect to Gabriel de Negro, DENUCÉ, *Inventaire des Affaitadi.* .., 20; the new wave of arrests and trials is reported by the Venetian ambassador Francesco Contarini in a letter from Brussels to the Senate, 2 November 1540, published in the *Calendar of State Papers. Venice*, ed. Rawdon-Brown, (1873), vol. V, doc. 229, 88. Otherwise, H. BRUGMANS & A. FRANK, *Geschiedenis der joden in Nederland*, Amsterdam (1940), I, 184. Also Renata SEGRE, 'La formazione di una comunità di marranos e portoghesi a Ferrara', in *Annali di Storia d'Italia* ed. C. Viventi, Torino: Einaudi (1997), vol. II 'Gli Ebrei in Italia'.

⁸² F. EDLER, 'The Effects of the Financial Measures of Charles V on the Commerce of Antwerp, 1539-42', *Revue Belge de Philologie et d'Histoire*, XVI, 665-73.

⁸³ surely a mistake in that Diogo is known to have died on 4 July 1543, Archivio di Stato, Venezia. Not. Atti, Paolo Lioncini, busta 7818, folio 1775.

⁸⁴ Neutral parties considered 'exercités' and invited to intervene for their advice were Antoine de Grimaldo, Jérôme de Spinola. Jean de Cuellar and Jean de Camarena. Requestboeken 1559, 79v, Archives communales d'Anvers.

⁸⁵ see J. SERRÃO, 'A Feitoria de Antuérpia', in his *Dicionário de História de Portugal* (1980), 330. J.-A. Halikowski-Smith, Stefan (2001), Portugal and the European Spice trade, 1480-1580
GORIS, *Etudes sur les relations commerciales méridionales.* .., (1925), 614-16 deals with the district of 1572.

Ximenes, Simon Rodrigues d'Evora and the brothers Antonio and Jeronimo del Rio, were *conversos* of Portuguese origin; Simão Rodrigues became known as 'le petit roi d'Anvers' and bought himself the title of Baron of Rhodes. Evidently, the New Christian community not only survived their short-lived persecution, but continued to hold the sales monopoly of spices in their grip for much of the course of the sixteenth century.

The Burgos consortium.

Spanish merchant capitalists grouped together as the Burgos consortium or *consulado*, of which the pre-eminent families were the de Haro and then the Malvendas, are known to have played a role in the early Portuguese imperial economy, though despite branches at Lisbon at Antwerp their role has remained considerably more obscured than that of German and Italian contractors. Did they not at least supervise re-export to the Spanish market, perhaps via Medina del Campo, where the Haro kept a branch?

From 1503 there is already notice of de Haro company dispatches of copper, silver, wheat and cloth from Antwerp to Lisbon. Cristóbal de Haro (typically recorded as Christovaram de Haram) established himself in Lisbon from about 1505, where he acted as agent for the Fugger, and is mentioned alongside B. Marchioni and J.F. Affaitati in the list of those 'que nesta cidade ganham muyto dinheiro'.⁸⁶ Conventionally he is understood to have participated in the Portuguese spice trade from around 1510, when a grant of 'vastos privilégios' was extended to the *Burgaleses*, but there are leads that would suggest an earlier date.⁸⁷ In an intriguing document of 8 March 1509, Diego de Haro, the family representative in Antwerp, confirmed under oath in response to the request lodged by Jan Marcelis, together with Wilhelm Höchstetter and Bartolomäus Welser, that the Portuguese Crown had sold pepper over the past three years at the price of 22 cruzados per 'cent' (quintal) and that the Haro had never bought under this price.⁸⁸ Are we to understand that de Haro, acting on behalf of the Fugger, had awoken suspicions amongst the High German trading fraternity of buying on better terms than the rest? Or had he, by this date, already broken off from the High Germans and gone his independent way? In any case, the Portuguese *cartas de quitação*

⁸⁶ *Documentos do Arquivo Histórico da Câmara Municipal de Lisboa* (1960), vol. IX, 126 ff.

⁸⁷ privilege of 27 April and 18 September 1510, A.N.T.T., Livro de Místicos, fls. 100b & 105v; Chancelaria de D. Manuel, liv. 17o, fl. 29. Hermann KELLENBENZ, 'Die Brüder Diego und Cristóbal de Haro' in *Aufsätze zur Portugiesischen Kulturgeschichte*, 14 Bd. (1977), referring to Rolando A. Lagurada TRÍAS, *El predescubrimiento del Rio de la Plata por la expedición portuguesa de 1511-1512*, Lisbon (1973), 108, #44 and A.N.T.T., *Corpo Cronológico*, pte. II, m.24, doc. 205.

⁸⁸ DOEHAERT, *Études Anversoises* (1962), II, 279, n. 1912. This oath was repeated a year later and is published in Halkowski-Smith, *Stevan* (2007), Portugal and the European spice-trade, 1480-1500, published online by Brill, 308-313, n. 2136. DOI: 10.2870/92585

register payments of an enormous 4,646,705 reais to André Rodriguez, *tesoureiro da especiaria*, between August 1509 and January 1511.⁸⁹

By the middle of the second decade of the century Cristóbal appears in Portuguese quittances alongside unnamed partners as *tratadores de S. Lioa*.⁹⁰ The 1,817,000 reis he paid appear to have been for slaves, both West African and Brazilian. Whilst on one of these slave trading missions off Guinea, de Haro lost some ships and lodged a claim for compensation to the sum of 16.000 ducats with the Portuguese King. Rebuffed, the de Haros promptly deserted the Portuguese for the Spanish cause, concentrating their efforts on promoting and investing in the first fleet to sail the rivalrous South Atlantic route seeking the Moluccas from the east. Diego de Haro undertook to sell the cargo of Magellan's sole surviving vessel, the *Victoria*, for the Spanish Crown at Antwerp and was subsequently named as superintendent of the Casa da Contración at La Coruña.⁹¹

It would have been reasonable to assume that Spanish involvement in the Portuguese spice trade ceased with the dispute over de Haro's lost ships and its upshot, their rapid change of allegiance. It is true that we find Burgos merchants thereafter in Pisa and Florence, supplying the Italian market with West Indian products from the Spanish New World, but this defection strangely did not rupture all trading relations between Portuguese and Burgales.⁹² Marques de Almeida indicates that the armada that set sail from Lisbon in 1520 under Jorge de Brito was financed by the *mercadores de Burgos* and records from the Casa da Índia attest to their remuneration in pepper.⁹³ And in 1540 they are known to have participated in an important spice contract that Joao III negotiated for more than 1,800,000 cruzados, which the Spanish ambassador Luís Sarmiento described as 'el mayor contrato que dizem que acá nunca', and which, it was naively hoped would resolve the debt issue in Flanders ('*con esto*

⁸⁹ *A.H.P.*, vol. I, 1903, 284, carta 79. Part of a total sum of 7.634.635 *reais* registered relating to the commercial activities of the Spanish consortium (João de Escalantes, Lopo del Hoyo and Pero de Castro) in the Portuguese Empire, GODINHO, *Os Descobrimentos e a Economia Mundial*, II, 239.

⁹⁰ Carta de Quitação de D. Manuel, no. 103 in *A.H.P.*, I, 358 ff.

⁹¹ Jean DENUCÉ, *Magellan. La question des Moluques et la première circumnavigation du globe*, Bruxelles, Hayez (1911).

⁹² Angela ORLANDI, 'Zucchero e Cocciniglia dal Nuovo Mondo. Due Esempi di precoce diffusione', in *Prodotti e Tecniche d'Oltremare delle Economie Europee, secoli XIII-XVIII, XXIX Settimana di Studi*, Istituto Internazionale di Storia Economica F. Datini, Prato, 14-19 aprile 1997.

⁹³ A. M. de ALMEIDA, *O Fisco Lisboa Antuérpia* (1989), 105, entry under 'Casa da Índia' in *Dicionário de História da Universidade de Lisboa*, Instituto.

deste contrato que dizem que saldará de aquella deuda').⁹⁴ What is not clear from official imperial correspondence is whether Charles V was more interested in campaigning for his subjects' involvement in the spice trade, or whether it was more important for him that the principal trading axis continue to pass through the Low Countries.⁹⁵

The history of the contractual trade for the re-export of spices over the first half of the sixteenth century would appear, if dominant, then also ultimately a disappointing one. Contract trade was, along with the collapse of the Crown Feitoria, the victim of the changes of 1548 in that João III invited buyers thereafter to Lisbon to purchase freely and directly from the Casa da Índia at the wholesale price. However, as with the 'Regimento do trato da pimenta, drogas e mercadorias da Índia' which succeeded it in March, 1570 (see §13.1), neither of these two ostensible watersheds carried in its train sustained change. The European spice trade was not for freeing up; sub-contracting continued to be the norm.

How can this resilience be reconciled to the King's heartfelt dissatisfaction? If the King was hoping through contract trade to cement a steady commercial partnership and achieve some sort of stability as far as the European spice trade was concerned via his policy of a fixed sales price, and thus assure himself a regular income, then he failed. A lot of the disturbance admittedly took place at Antwerp, where the payment in advance system, compounded by the Crown's fixed price sales, provoked a frenzy of speculation at Antwerp as to the possible quality and value of the incoming cargo. Charlatans like Christopher Kurz, a German agent of the Tucher at Antwerp, were even able to profit from the uncertainty by offering 'a system for foretelling in advance the price of pepper, ginger and saffron' by means of astrological computation. The upshot nevertheless remained that a number of contracting houses which commonly traded with the Portuguese Crown were made bankrupt, the whole atmosphere on the Antwerp market was described as one of fear (*medo*) and the result, as the feitor noted disapprovingly, was that few spices were sold in the run-up period to a large consignment's arrival (*muito pouco despacho*).⁹⁶ The *Chronyk van Antwerpen* records how

⁹⁴ Madrid. Archivo General de Simancas. A.G.S., Estado, Legajo 372, doc. no. 32.

⁹⁵ 'Y quando entendiesedes que esto no levava camino y que se queria concluyr con algunos para levarlo por via de Itália, haveis de hazer todo lo posible por impedirlo y estorvarlo y enderesçar que se haga con personas que lo hayan de traer a estas tierras, usando para elo de todos los terminos que pudieses halar', letter from Charles V to Lope Hurtado, dated 16 November 1549, Brussels, A.G.S., Estado, Legajo 374, doc. 117.

⁹⁶ letter from the factor, Silvestre Nunez, and dated at Antwerp on June 21, 1516: 'Estes preços teverã estas mercadorias mas ouue muito pouco despacho a ellas aasy por os bancos Rotos como por o medo que tem de comprar antes que venham as naos da Índia', FREIRE, *Notícias da Feitoria de Flandres*, 31; QUIRINI mentions the bankruptcies: how, 'per il dubbio che avriano che i prezzi calassero, sia per volontà di Sua Maestà, o per morosezza de' mercaderi, che essi poi restassero falliti, come alcuni a questo tempo passate sono restati' in Hankowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580

in the twenty-four hours following the arrival of a fleet, the price of raisins could fall from 6-7 stivers to ½ stiver.⁹⁷

But the Crown itself was directly responsible for many such market uncertainties, which were in any case far from specific to Antwerp. Estevão Vaz wrote to the King in October 1510 questioning the policy of issuing contracts on incoming pepper cargoes at different prices depending on the timing of fore-payments.⁹⁸ Naturally those who paid up front for an established amount, before the armada even set sail and with all the risk of the lengthy homeward *carreira* in front of them (*na primeira paga*) could negotiate a lesser price (around 18 cruzados/quintal) than those who bought at the last instance (*na derradeira paga*), and who paid as much as 22. Part of the problem was that it was never possible to gauge quite how much pepper was being transported back to Lisbon; how much, for example, would be lost in shipwrecks, and thus what was the size of the contracts the King could offer expectant merchants. But it was quite unethical to cede the priority over incoming cargoes to those who had paid last, and thus most (*os contratos que se ora fizeram per que se roube na derradeira paga a pimenta que derem de qualquer armada*), hereby jeopardising earlier contracts.

Of these manifold uncertainties, the rebound was ultimately taken by the Crown itself, which found it increasingly hard over the second decade of the sixteenth century to contract out the sale of its spice holdings.⁹⁹ Even when concluded, the contracts were frequently broken short, necessitating a number of uncertain ambassadorial dispatches to central Germany. Involvement with New Christians from the 1520s was perhaps easier in that they operated as a single consortium and were sizeable and close enough to the Crown for effective market collusion, but such behaviour, as we have seen, only invited political controversy.

The difficulties were not merely a product of the times. In 1542, the Banco Salviati bought from the Spanish merchant Francisco del Castillo the fourth part of a sales monopoly of alum that came from the papal mines at Tolfa. The sales monopoly, as we have seen similarly with the New Christian consortium involved in the spice trade of this period, was

Le Relazioni degli ambasciatori veneti, 16.

⁹⁷ *Chronijk van Antwerpen*, F.G. Ullens: Leyden (1743), and cited by WEGG, *Antwerp, 1477-1559*, 180. The best historical study of the effects of speculation on the movement of prices at a given market would seem to be that of Pierre SARDELLA, *Nouvelles et spéculations à Venise*, Cahiers des Annales, Paris (1948).

⁹⁸ A.N.T.T., C.C., pte. I, m. 9, doc. 79.

⁹⁹ See for example the complaint by the Portuguese ambassador in Brussels, Pera Correia, to D. Manuel, T.T. C. no. 21, doc. 12, fol. 2. DOI: 10.2870/92585

divided with particular national markets in mind. The Salviati sales monopoly share was intended for England and the Low Countries, was shared with two other Spanish merchants resident in Antwerp, Fernando Dazza and Martin Lopes, and was to run for a lengthy twelve years and foresaw each participant's share as 12.000 cantars a year.¹⁰⁰

Where did this contract succeed, where those on the pepper trade failed? I suspect the answer lies somewhere in the nature of capitalism. Braudel would instruct us that exclusive contracts for the most lucrative commodities of sixteenth century commerce belong to the pinnacle of 'histoire événementielle'. The jostling for positioning was intense, these spice contracts were part of what Gerald Strauss has called the 'slippery world of high finance'.¹⁰¹ In this sense, alum simply offered much calmer backwaters for operation.

What was the symbiosis between contract trade and trade through the Crown *feitoria*? Well, the exclusivity that comes to feature in later re-export contracts can't have meant much more than being the only party with whom the Crown at any one time had dealings with; beyond that, the King either excepted the quantities needed to cater for the domestic Portuguese market, as in the set of privileges granted the High Germans in 1503, or else continued to market through his own networks the duties that had been paid him in the products themselves. But latterly we find even these Crown rights openly surrendered. In 1529, for example, Lucas Giraldi arranged to buy all the King's duties of sugar for that year for the Affaitati.¹⁰² One message is clear; that an active state monopoly on sales to be administered by the *Feitoria* was as unworkable as the monopoly rights on purchase in the many ports of Malibar, and equally the carriage between India and Lisbon. Here again we see the imperial dynamic moving in unison - sales, purchase and carriage each followed the same organisational trends.

Could we suggest that contracts challenged the idea of *feitoria* in that the two parties, Crown and private contractor, increasingly chose to exchange at Lisbon? Yes, substantially, though the Crown *feitoria* in Antwerp maintained its importance as negotiator and intermediary. It was not definitively cut off by the sub-contracting regime, for at least Antwerp was clearly favoured as a point of trans-shipment as much by private commerce as by the Portuguese State, as we have seen in Chapter 4. But it was cut off in the sense that

¹⁰⁰ Valeria PINCHERA, 'Mercanti Fiorentini ad Anversa nel Cinquecento: I Salviati', *Incontri. Rivista di Studi Italo-Nederlandesi*, numero 4 (1989), 159. The best work on the alum trade is that of Jean DELUMEAU, *L'alun de Rome XVe-XIXe siècle*, Paris (1962).

¹⁰¹ G. STRAUSS, *Nuremberg in the Sixteenth Century*, Indiana (1976), 128.

¹⁰² Carlos de BASSOS, 'Relações históricas luso-italianas' in *Anais da Academia Portuguesa da História*, Halikowski Smith, Steinhilber (2001), Portugal and the European spice trade, 1400-1500. *Journal of Economic Surveys* (1996), volume 7, 154. DOI: 10.2870/92585

the crown *feitoria* was no longer linked by regular sailings of state fleets, and was forced to communicate with Lisbon largely through chartering private vessels.

Ultimately I think that the Portuguese Crown was forced to retain its own redistribution structure if only because contracts were so inclined to break down and because there tended to be a surfeit of spice that remained after metal deals. Between 1508 and 1549 there were in effect at least two concurrent sales policies, one that disposed of spices from Lisbon, the other from Antwerp. This makes it particularly difficult to talk of historical processes and trends, of singular causes of failure, of take-overs by intermediaries with a clearcut winner and a clearcut loser.

In any case, we ought to be particularly careful with the types of conclusions that we draw from contractual evidence. This was, in many ways, the most artificial level of business practice, what Braudel has described as the realm of ‘calculations and speculations’ rather than organic mechanisms.¹⁰³ Places of delivery or signing were easily changed, one contractor substituted for another. Special circumstances surrounded these few and special agreements. Many contracts, as we have seen, were broken off. As Braudel has indicated, the weightier and more definitive currents of material life went on further down the hierarchy.

6.2. Sales at public fairs.

The role of spice sales at public fairs remains unclear. Certainly spices crossed hands at fairs further down the trade chain, that is after the large contractual agreements we have just been investigating reallocated the goods, either forwarding them on to the regional fairs of whichever respective national market on their own account, or selling them straight on to wholesale buyers at Antwerp. More importantly, however, did the Flemish, what became the Brabant fairs, serve as a significant clearing mechanism for the European spice trade, or are we to fall in with the conventional notion of fairs as serving primarily networks of regional rather than international redistribution?¹⁰⁴

These Brabant fairs consisted of four trade fairs a year each lasting six weeks and took place from the end of the first quarter of the fifteenth century. Two were based at Bergen-op-Zoom (one at Easter and the other, the ‘colde faire’, which began on 11 November, or St. Martin’s Day) and two at Antwerp (one at Whitsuntide, called *Sinxen-Marte* or *Pfingst-Mass*,

¹⁰³ F. BRAUDEL, *Civilisation and Capitalism, 15th-18th century*, vol. II, ‘The ‘Wheels of Commerce’, trans. Siân Reynolds, New York (1984), 22.

¹⁰⁴ Charles MERLINDEN, ‘The Fairs of Champagne and Flanders’, in *III of the Cambridge Economic History of Europe*, Cambridge (1971), 135. DOI: 10.2870/92585

the other beginning October 1, which was St. Bavo's day). Payments for commodities purchased were limited to particular dates at the very end of fair trading, and after bills and loans had themselves been settled. In Bergen's case, accounts were settled in Antwerp, though this was ultimately a prelude to the collapse of these fairs during the 1540s and their wholehearted transferral to Antwerp.¹⁰⁵ Already in 1516 documents refer to the 'three fairs' of Antwerp.¹⁰⁶

There is no question as to the regional importance of the Brabant fairs. The convent of the Béguines in Brussels and the infirmary of the Béguinage of Lier both regularly bought their spices at the St. Bavo fair, which took place at the beginning of October, that is, at the beginning of the cold season.¹⁰⁷ But what about the fairs' international importance? Historiography is keen to point out how the central German fairs were closely associated with the rise of the Brabant fairs in that together they formed a single connected regional cycle of trade, which enhanced the regularity and balance of traffic. This in itself does not explain why in 1519 Rui Fernandes planned to speculate on the forthcoming delivery of Portuguese pepper at the September fair at Frankfurt rather than at the St. Bavo fair in Antwerp.¹⁰⁸ But there is nothing to stop us believing that either the international contracting consortia or the Portuguese feitor sold, in his case what had not been contracted or was in excess of stipulated requirements, directly at the Flemish fairs and on to an international market. The fairs were certainly closely monitored by the factor, as they were by many an international merchant-capitalist and even diplomats like Quirini so to gauge their going market prices: this was crucial to the conclusion of any international contract, and such information was regularly despatched back to Portugal.¹⁰⁹ The factor also bought large sums of silver on the Antwerp market, payment being future deliveries of pepper at the Casa da India or occasionally letters

¹⁰⁵ The description is that of L. GUICCIARDINI, *Description of the Low Countreys*, 1593, 26v-27. Vincenzo Quirini, ambassador to Philip of Burgundy in 1504 mentions the two annual fairs at Antwerp in his *Relazione di Borgogna con aggiunta di alcuni particolari intorno...*, in *Le Relazioni degli ambasciatori veneti*, I, 10-18. The decline of the Bergen fairs is observed by Georg BRAUN & Franz HOGENBERG, *Civitates orbis terrarum*, Cologne: G. Kempensem (1572-1617), repr. with intro. by R.A. Skelton, Amsterdam: Theatrum Orbis Terrarum, (1965), III, 14.

¹⁰⁶ FREIRE, *Notícias da Feitoria de Flandres*, doc. LV. Was the Kampen fair not also a Brabant fair?

¹⁰⁷ VAN DER WEE, *The Growth of the Antwerp Market...*, I, 306.

¹⁰⁸ letter of 18 September 1519, doc. XVI, in BARATA, *Rui Fernandes de Almada, diplomata português do século XVI* (1971).

¹⁰⁹ see, for example, the letter one must attribute to Silvestre Nunez, dated June 21, 1516 at Antwerp. Published in FREIRE, *Notícias da Feitoria de Flandres*, 31; also QUIRINI's missive in *(The) Calendar of State Papers and Manuscripts relating to English affairs existing in the Archives and Collections of Venice etc.*, 7 vols. Ed. by Halkowski-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580. European University Institute no. 857 et al.

of exchange taken on the Casa.¹¹⁰ But he also must have sold, for we have record of a settlement on 75 bales by 'Jeronjmo Frescobalte' with half the payment to be made 'a feira da Setembro e a outra a Sam Martinho'; and not only to the grandees of the contracting trade, but to the Cologne merchants, who traditionally bought up spices at the Antwerp fairs, and to the English, who were reported to have bought 'mais do que nunca compraram' at the latest Bergen fair in February 1511.¹¹¹ We are evidently meant to be impressed that as much as 4600 bales were sold on that occasion.¹¹² The Flemish Fairs then, given their association with Antwerp, undoubtedly took on a particularly international flavour, as the Champagne fairs before them and as a few others in sixteenth century Europe.¹¹³

Beyond the Low Countries, one can expect to find merchant company brokers forwarding the goods to a number of major European fairs which, as we have noted, served as commercial hubs for regional, national and even, on occasion, international redistribution.¹¹⁴ Germany was the country *par excellence* of the fair, as the Portuguese diplomat Almada noted, the cities (*vilas*) mobilising themselves for the task of governing the roads so as to avoid banditry and the spread of plague, which reduced the vaunted fairs of Frankfurt in 1519 to a trickle (*ao mínimo*).¹¹⁵ In fact, the twice yearly Frankfurt *Messen*, considered by Nordmann the nodalpoint (*Knodenpunkt*) of trade between Upper and Lower Germany, was debilitated over the longer term, and from which there was no full recovery until the second half of the sixteenth century.¹¹⁶ Another important fair of the time was held thrice yearly (New Year, Easter and Michaelmas) at Leipzig, while in Eastern Europe more generally there were fairs at Posen and Cracow; in Spain, at Medina del Campo; at Deventer

¹¹⁰ GODINHO, *L'économie de l'Empire Portugais aux XVe et XVIe Siècles* (1969), 460.

¹¹¹ BARATA, Rui Fernandes de Almada, *diplomata português do século XVI*, (1971), 189.

¹¹² FREIRE, *Notícias da Feitoria de Flandres*, document xxv and Jan MATERNÉ, 'L'Heure d'Anvers, Marché des Épices Portugaises', in *C.G.E.R.*, 170.

¹¹³ for the sake of this comparison, see C. VERLINDEN, 'The Fairs of Champagne and Flanders' in *Cambridge Economic History*, vol. III, (1971).

¹¹⁴ H. SÉE, 'Quelques aperçus sur le capitalisme commercial en France au XVIe siècle', *Annales d'Histoire Economique et Sociale*, 1 (1929), 551-61, with reference to Jacques SAVARY's *Le Parfait Négociant*. Marian GRYZCZ, similarly, has challenged the concept of an *allgemeiner Innenmarkt* as far as Poland is concerned, suggesting that a far more accurate interpretation would be that of 'ein bestimmtes Ensemble regionaler Märkte', in I. BOG, *Der Außenhandel Mitteleuropas, 1450-1650*, (1972), 109.

¹¹⁵ letter of 18 September, 1519, doc. XVI in M. BARATA, 'Um Português na Alemanha no tempo de Dürer', separata da *Revista da Faculdade de Letras de Lisboa*, no. 15, (1973), 199-200.

¹¹⁶ H. NORDMANN, 'Oberrheinland und die europäische Handelsringblätter des hansischen Geschichtsvereins', no. 26, Weimar (1939), 48.

in the northern Netherlands; at Geneva, though this one seems to have tailed off by the beginning of the sixteenth century, if continuing to congregate until the 1520s/30s, at Strasbourg and Châlon-sur-Saône. The Lyon fair was held four times a year for a period of a fortnight and formed the distributive nucleus of the entire kingdom from the reign of Louis XI (1461-). It attracted a substantial presence of foreign merchants equally. Trade at the fair was carried out free of duties, aided by free circulation of foreign currency, and with the institution of special legislative machinery to resolve any commercial disputes. Merchants, whatever their nationality, were assured of the King's personal *sauvegarde*.¹¹⁷ The fairs at London, finally, were of a similarly national scope, and to which the retainers of the Countess of Leicester were readily sent for some of the rarer spices rather than to the great fairs of Winchester or Boston.¹¹⁸

Alongside the major fairs co-existed a plethora of smaller fairs, such as the Nuremberg *Heiltumsmesse* or the Würzburg *Allerheiligenmesse*, that at Cologne, as well as the small but well documented fair at Zurzach, on the Rhine west of Schaffhausen. We might place in this category the Nördlingen *Pfingstmesse*, at the juncture where the Frankfurt-Augsburg route met that of Nurnberg-Lake Constance, which if secondary nevertheless pulled merchants from a wide catchment area that embraced the whole of central Europe including Rhinelanders from Aachen and Cologne, through Leipzig traders and Swiss from St. Gall, Berne and Geneva to Silesians from Breslau, and more rarely Italians from Milan and Flemings from Malines, Tournai and Antwerp.¹¹⁹

Beneath these were others, which might be better called markets and converged more frequently, sometimes a specific day of the week, and were of smaller scale still. Subjected to stricter municipal regulation, these markets fell under the *droit seigneurial*.¹²⁰ The sixteenth century nevertheless witnessed significant innovations that slowly freed up these traditional, heavily regulated structures; one of these was the *mercuriale*, a daily or weekly bulletin produced recording the day's going prices.

6.3. Wholesale trade.

¹¹⁷ René GASCON, 'Un siècle du commerce des épices à Lyon', *Annales E.S.C.* (1960), 638.

¹¹⁸ Margaret Wade LABARGE. 'The Spice Account', in *History Today*, (1965), vol. XV, no. 1, 32.

¹¹⁹ The Geneva fairs have been studied by F. BOREL, and those at Lyon by R. GASCON. For the German fairs, see H. AMMANN, 'Die deutschen und schweizerischen Messen der Mittlclaiter', in *Receuil de la Société Jean Bodin*, vol. V, Brussels (1953). Also IBID, 'Die Nördlinger Messe in Mittelalter, Verfassungs- und Landsgeschichte', *Festschrift für Th. Mayer*, Bd. 2, (1955).

¹²⁰ Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
 European University Institute *Institutions de la France au XVIIe siècle*, Paris (1948) DOI:10.2870/92585

Wholesale trade is permanent trade, the form of exchange at emporia, or those market places in which a variety of goods is more or less continuously available and in which a plurality of buyers and sellers can meet without undue restraint under predictable conditions of supply and demand.¹²¹ In Braudel's opinion this is *le marché proprement dit*, the natural or organic state of market relations, unimpeded by political or social control; in eighteenth century Europe this type of trade was typified most grandly by the international stock exchange or *bourse*, of which there was one in at least each national capital. But otherwise, below the constant push by active parties engaged in the European spice trade towards an oligarchic or at best monopolistic control, reflected in what I have called the contract trade, permanent private trade formed the crest of a slow-moving development which steadily supplanted the existing network of seasonal or sporadic markets, which had become inadequate for the fast pace of the urban economy, in spite of specialisation and concentration. This redundant fair trade migrated in its turn, little by little, to the east, to regions where urban life, and consequently regular trade, was not yet so highly developed as in the north-west of the continent.

The facilities for permanent trade at a high turnover and at an international level remain one of the fundamental distinctions between Antwerp and Lisbon's respective roles in the spice trade at the beginning of this period. Antwerp spearheaded a rapid break from the traditional medieval guild organised *pand* or *galerie*, in which the respective goods were sold in a number of identical *boutiques* according to strict regulation, weight and quality control, ceiling sales and curtailed opening hours. One of these, the *Engelsche pond*, emerged from this system as possibly Europe's first freely operating large scale market, what by Guicciardini's day had become known as the Bourse des Anglais, was open twice daily, both morning and late afternoon (*le soir*) and where the possibilities were 'principalement d'acheter et vendre marchandises de toutes sortes'. The *Engelsche pond* was no longer the poor brother to the fairs of Brabant; its fixed location and daily opening, combined with the ever increasing standardisation and quantitative circulation of commodities, allowed it the luxury of selling on samples rather than the inefficient and never ending goods' haulage around the fairs of Europe. But the rise of the *Engelsche pond* was complemented by the transformation of the communal *Bourse*, which was steadily losing its commodity market character to become the exchange where 'traicent principalement de change et dépôts', the origin of the stock

¹²¹ Dietmar ROTHERMUND's definition from his 'Asian Emporia and European Bridgeheads', in R. PTAK & D. ROTHERMUND, *Emporia, Commodities and European Trade in Asia and Maritime Trade, c. 1400-1750*, Stuttgart (1991), University Institute

exchange as we understand it today.¹²²

But transcending the traditional fair structure had not been an easy transformation. From the last quarter of the fifteenth century, the city of Bruges had complained repeatedly that the Brabant merchants were trying to turn Antwerp into a permanent sale centre, trading out of fair season and going so far as to setting up booths and offices that were open the whole year round.¹²³ Indeed, the period of the fairs was being constantly extended. Under pressure from Bruges, the government imposed a return to the old fair dates, but the fairs themselves were soon rendered obsolete by the transformation of the *Engelsche pond* and the appearance of a number of *halles* which rapidly followed and grouped themselves according to the type of products sold rather than the town of their origin. By the 1530s the structures of an international emporia were definitively established and rapidly supplanted Antwerp's old market system.¹²⁴ Van der Wee has shown how if the Church of Our Lady of Antwerp drew 92% of its commercial income from rents on stalls and buildings let during the fairs in 1491, in 1547 this had dropped to 5%, whereas the part of the income from shops, stalls and buildings which were permanently let had risen to 95%.¹²⁵ The Bergen fairs, always the understudy to the Antwerp fairs, disintegrated even more rapidly.¹²⁶ Henceforth, the Brabant fairs served as little more than an arena for the settling-up of financial debts or else the re-negotiation of debt repayments.

To what extent was Antwerp, then, the sole European emporium of large-scale permanent trade in spices during the first half of the sixteenth century? Venice traditionally sold its spices 'at the German fair' whose movements Sanudo comments upon observantly

¹²² Emile COORNAERT, 'Les Bourses d'Anvers aux XVe et XVIe siècles', *Revue Historique*, Jan. - March 1957, t. CCXVII, 26.

¹²³ R. EHRENBERG, *Das Zeitalter der Fugger*, vol. II, 9. The city of Bruges complained at the Hansa towns' instigation in 1484, *Hanserecesse*, ed. Schäfer, I, 399 & II, 25. Between 1479-1532 there were 12 complaints on this issue, E. COORNAERT, *Les Français et le commerce international à Anvers*, Paris (1961), II, 141. The government re-imposition of the original duration of the Brabant fairs is mentioned in Gilliodts van SEVEREN, *Cartulaire de l'ancienne estaple de Bruges*, Bruges (1904), II, 317.

¹²⁴ There is some dispute as to when precisely the *Engelsche pond* emerged as a permanent commodity market. Georg SCHANZ holds it's inception to 1515, *Englische Handelspolitik gegen Ende des Mittelalters mit besonderer Berücksichtigung des Zeitalters der beiden ersten Tudors Heinrich VII und Heinrich VIII*, Leipzig: Duncker & Humblot, (1881), I, 14, whereas Augustin THYS opts for 1550, *Historiek der straten en openbare plaatsen van Antwerpen*, (1893), 86. One might point out that reference to a *halle d'espices* where foreign merchants were obliged to sell above a certain 50 pounds weight of goods is made for Bruges for the year 1470, 'Ordonnance sur le commerce des épices à Bruges', 4 March 1470, and published in VAN DEN BUSSCHE, *Flandre et Portugal*, (1874), 200.

¹²⁵ VAN DER WEE, *The Growth of the Antwerp Market*. . . , Graph 28, vol. I, appendix 41/5.

Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
¹²⁶ *Journal of Economic Geography*, 2001, app. 41/5.

between August 10-18, 1503.¹²⁷ But the door was open to stocks of spices at any time of the year whether directly from government or private sources. Portuguese visitors to Venice marvelled at the 'immense shops piled with spices' that stood in the Calle della Mercerie, 'of such a kind that one might say that this street is a permanent established fair, stocked with all the goods in the world, and where one can meet merchants come from all corners of the world'.¹²⁸ But there are few other instances of such large open markets. Rather, if they were permanent, they traded on samples like the *lonjas* of Castille.¹²⁹

Most cities resisted permanent trade because of the damage it caused to established, local interests. Thus, for example, Joachim Finold of Nürnberg, together with various other foreign traders, was begged by the Leipzig Rat on 14 December 1582 not to sell spices outside market times. The issue ultimately seems to be more than anything one of scale of sale, for retail trade was equally a form of permanent trade, only that retail trade, in Heckscher's typology just one step above personal purchases, catered for the most immediate market.¹³⁰

The retail market was carefully distinguished institutionally from emporium trade. Legislation was passed by the emporia with the end that foreign merchants be compelled to make a minimum purchase and prohibited to sell under an established quantity of spices; in the case of Bruges a bale of ginger at 300 pounds, or else of nutmeg at 60 pounds.¹³¹ In Kraków, saffron, nutmeg and cinnamon were not to be sold in quantities of less than half a stone (7 pounds), cloves and ginger less than one stone (14 pounds) and pepper and caraway seeds in less than one sack (*worek*).¹³² What we have here are local communities successfully organising a defence of their self-interests at the most immediate level. In Leipzig, for example, retail tradesmen (*Krämer*) complained that no other city gave out such

¹²⁷ SANUTO, *I Diarii*. . . , II, 282 and V, 59.

¹²⁸ description of Master Afonso, Chief Surgeon in the Indies, who returned to Portugal in 1565 via Venice. A. BAIÃO ed., *Itinerários da Índia a Portugal por terra*, Coimbra (1923), ch. 6.

¹²⁹ F. MAURO, *Le XVI siècle Européen. Aspects économiques*, (1981), 179-180.

¹³⁰ HECKSCHER develops this distinction in *Der Merkantilismus*, trans. Gerhard Mackenroth, 2 Bde, Jena: Fischer (1932), II, 67.

¹³¹ *Ordonnance sur le commerce des épices à Bruges*, 4 March 1470, which stipulated: 'que doresnavant ne sera loisible ne permis à aucun marchand estrangier, quel qu'il soit, de acheter ne de vendre, l'un à l'autre, les parties de biens et marchandises cy après déclarez, moins ensemble que cy après est spécifié.. Et se aucun marchand estrangier achate moins desdits biens aux autres marchans estrangiers, dedens la ville ou l'eschevinnaige de Bruges, que ledit taux, et il en est trouvé culpable.. fourferra, à chacune fois, l'amende de cinquante livres parisis', 193 ff, VAN DEN BUSSCHE, *Flandre et Portugal*, (1874).

¹³² cited by S. LEWICKI, *Handel Krakowa w XVII w. i jego związek z handlem w Polsce* (1902), 181-3 from S. LEWICKI, *Prawo składu w Polsce*, Lwów (1910), pp. 57-59. DOI: 10.2870/92585

generous privileges to foreign traders, who were chiefly Nurembergers and citizens of Isny, who were named and villified. It was proposed that the factor of the foreign merchants become a Leipzig citizen (*Bürger*) and the foreign merchants responsible members of the *Kramerinnung*, and consequently only with the portion of trade respectively apportioned them (*Gesellschaftsanteil*) take part in the retail trade (*Kleinhandel*) outside market times.¹³³

What kind of a market then was Lisbon? Here there were no public fairs, and it was not, after the first five years of the sixteenth century dispelled the King's dreams, an open market, an emporium in one sense of the word. We have seen that German sub-contractors, and that later the New Christians, lobbied hard for exclusive rights to European re-distribution and which the King appears to have accorded them, together with the stipulation that they export these same spices out of his realm so as, conceivably, to avoid the problems of stockpiling experienced initially and so that there could be no possibility of a black market establishing itself, one where the open market could offer spices at a price less than the official sales price established by the King. So what then were the smaller quantities of spices freely available on Portuguese markets and that enticed a type of buyer we shall typecast as *comprador* and investigate more fully in the next chapter, business visitors to Lisbon like Groenberger in 1506, or one Jean Rapé, who acquired spices in Porto in 1559? Do they hint at evasion of the formal control stipulated in the exclusive contracts we have already cast an eye at?

Most definitely. The Crown's preferred manner of sale was a wholesale contract with terms favouring large-scale and long-term exchange. Correspondingly, the right to retail trade was frequently and specifically denied foreign merchants. The city of Lisbon pressured Dom Pedro I to prohibit foreigners from buying Portuguese products in order to resell them inside the Kingdom already in December 1365.¹³⁴ In 1530, this formally extended to the spice trade with an injunction that thereafter the Casa da Índia was not to sell pepper for retail trade (*a retalho*), that is at less than a quintal, with the exception made for supplies to pharmacies.¹³⁵ But between the two levels, the Casa da Índia did not turn away foreign

¹³³ Gerhard FISCHER, *Aus zwei Jahrhunderten Leipziger Handelsgeschichte, 1470-1650*, Leipzig (1929), 223-4 referring to archival material at L.R.A. XLV, E.39, dated 6 October 1585.

¹³⁴ *Descobrimentos Portugueses*, #104, 118-9. Buying and selling anywhere outside Lisbon, with the added exception of the Algarve, was clamped down upon in a series of subsequent decrees (see H.V. LIVERMORE, 'The Privileges of an Englishman in the Kingdoms and Domains of Portugal', in *Atlante*, II (1954), 11 for 1390 stipulations; c.f. law of June 18, 1395 *ibid.*, II, #3). Cloth, specifically; was to be sold above a certain minimum quantity (decree of August 25, 1391, in *Descobrimentos Portugueses*, II, #191, p. 308).

¹³⁵ Armando CASTRO, *História Económica de Portugal*, III, 174, and D. PERES, *Regimento das Casas das Índias e da Índia* (1947), n. 466.
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buyers who presented themselves with receipts from specie deposited at the Casa da Moeda. The exclusive contracts alone were not stable or durable enough to constitute a singular policy of sales, and there was little point in transporting the goods at royal expense all the way to Antwerp if the job could be done by the market. The notion of exclusivity, further, as I have suggested, is problematic; not only, as Ivana Elbl has shown, had the King a long tradition of farming out licenses on trades already licensed out, but all the *liberdades* carted back to Lisbon must themselves have offered a colourful market as indeed we gather from Estevão Vaz, and which were courted by those who had sold speculatively 'at the last instance' (*na derradeira paga*), fell short from incoming cargoes and needed somehow to fulfil their obligations.¹³⁶

6.4. The municipality and the structure of local trade.

So far we have concentrated on the international consortia of buyers and contractors that dealt directly with the Portuguese Crown for re-distributive rights on spices. These independent dynamic actors were a good Braudellian stratum above the traditional corporative structures that represented particular towns or cities, and which had become steadily supplanted as far as international and subsequently nationwide re-distribution of luxuries had been concerned. Hybrid forms persisted in certain cases. The *pebriers sobeyrans* of Montpellier were a guild that directly imported from the ports of Barbary, Egypt and the Levant and who owned *comptoirs* right across the Mediterranean. But they did not have the capital to act alone, and depended upon groups of self-made *bourgeois* to hire the shipping and run the trade under commission for merchants at home.¹³⁷ So that, by the sixteenth century, the civic guilds were not exporters interested in the scale and opportunities of the European market, but importers keen to organise and articulate the trade within their locale. They were protected by a set of often self-accorded privileges that inhibited intervention in the domestic economy from outsiders at the level of domestic distribution, or retail. Only in the exceptions where corporations had been nationalised, such as was the case with the English Grocer's Company, was there a role to play in long-distance trade at a nation-wide

¹³⁶ Ivana ELBL, *The Portuguese Trade with West Africa. 1440-1521*, Ph.D.: Department of History, Toronto (1986), 334; A.N.T.T., C.C., pte. Ia, m. 9, doc. 79.

¹³⁷ HALICZERMAN, Stefan (2001), *Portugal and the European spice trade, 1480-1580*, l'ouverture du port de Cette, rédigée après les documents originaux et accompagnée de pièces justificatives, Montpellier (1861).
European University Institute DOI: 10.2970/92585

level.¹³⁸ Otherwise, the limit of guild trade seems to have been local fairs; in the case of Montpellier, the Beaucaire fair on the Rhone, 75 kilometres or so away.

The articulation of the inspection, trade and manufacture of spices within the urban municipality was complicated and multi-faceted if united under the patronage of Saint Nicholas. At the peak of the local market hierarchy there were the *grossiers*. At its heart were the *espessiyres* or *apothecarii* - later to become the *droguistes* - the former traditionally wholesale tradesmen of herbs and spices, the latter those who ground and mixed, made perfumes, conserves, medicines for prescription and worked in shops.¹³⁹ Furetière (1690) mentions two further *estats* making up the body of the *Marchands Espiciers*: the *Ciergiers* or *ciriers*, known elsewhere as chandlers or *candeliers de cera*, and *Confiseurs*, or confectioners.¹⁴⁰ From circa 1550, for example, Leonhard Paris of Antwerp sold spices and sugar at Leipzig directly to the confectioners (*Zuckermacher*). But on the whole these last two *estats* seem to have been of lesser importance and, in the case of the former, linked with the *pebriers de mercat*, those merchants that plied a modest retail trade. Spices also seem to have frequently been sold off in smaller quantities by retail tradesmen of other guilds as in the case of the silk merchants (*Seidenkrämer*) of Leipzig, especially since in German lands all retail traders were guilded together as *Krämer*.¹⁴¹

But it is often difficult to identify the division of labour at this level of trade, and the tensions within these corporations suggests that the issue was never clearly resolved. The splintering between *apothecarii* (a.k.a. apothecaries or treaclers, those who prepared theriac) and *espessaryes* (a.k.a. grocers, spicers, *aromatarii* or pepperers) that occurred from 1270 and was common throughout Europe by 1400, was patched up around 1560 when both were forced into the same guild, only to separate again, in England in 1617, in France as late as 1777, on the apothecaries' instigation.¹⁴² In Italy, the *speziali* don't seem to have been

¹³⁸ Pamela NIGHTINGALE, *A medieval mercantile community: the Grocer's Company and the politics and trade of London, 1000-1485*, Newhaven/Yale (1995), Introduction.

¹³⁹ see Louis IRISSOU, 'La pharmacie a Montpellier avant les statuts de 1572: I. Le Moyen Age. - II. A la fin du XVe siecle', *Revue d'histoire de la pharmacie*, nos. 85 and 86, March and June 1934, 217-257 and 265-305.

¹⁴⁰ Antoine FURETIÈRE, *Dictionnaire universel*, 3 vols., La Haye & Rotterdam (1690), repr. Paris: SNL - Le Robert (1978); see also *Dictionnaire historique des arts, métiers et professions exercés dans Paris depuis le treizième siècle*, ed. Alfred Franklin, Paris (1906), repr. (1968).

¹⁴¹ G. FISCHER, *Aus zwei Jahrhunderten Leipziger Handelsgeschichte*, 213; Heinrich BECHTEL, *Wirtschaftsstil des deutschen Spätmittelalters*, Munich: Dunker & Humblot (1930).

¹⁴² note that this trend does not bear up in eastern Europe, where the pharmacy was a relatively late arrival - the first opened in Cluj (and) in 1573 and the European one only, in 1904-500 mid-eighteenth century, E. CRIȘAN, *Materia Medica de Transilvania*, Cluj (1996). DOI: 10.2870/92585

active traders at all, but uniquely medicine preparers, or apothecaries, while in sixteenth Poznań spices, including the chiefly comestible ones, were sold through pharmacies (*apteki*).¹⁴³

There was a further functional division between apothecaries and physicians, the 'self-appointed leaders of the medical profession', who requested and administered the remedies prepared for them by the apothecaries according to specific recipes that had become legally enshrined in official dispensaries (*Dispensatoria*). The apothecaries possessed no recognised authority to prescribe drugs or treat patients, although in Urbino they were obliged to carry a license of *medico addottorato od esperto* if they were to compose electuaries or other purgative medicine, and in continental Europe apothecaries were indeed expressly prohibited any kind of *cointeressanza* or connivance with the medical profession.¹⁴⁴

As corporations or guilds, all of these three bodies worked in close conjunction with the civic administration. We find, for example, that one of the four Montpellier *consuls de mer* was taken alternately from the *pebriers sobeyrans* and the *apothecarii*. They also became *custodes mercium et averum*, the civic body responsible for maintaining a quality control on merchandise. The second chaperone of the *consul majeur* was nominated from the ranks of the *pebriers sobeyrans*, whereas the fourth was an *apothecarius*.

Towns, just as the authorities managing public fairs, carefully imposed ceiling limits as to the prices of the spices put to sale; more often still, as with the German *Arzneitaxen*, it was a fixed price *per se*, in Poznań established once a year. In Venice, it was the Collegio degli Speziali that stipulated the price which pharmacists could ask for their drugs and spices, and this price applied to other cities of the Republic, such as Bergamo and Padua in equal measure. The guilds also commonly established maximum volumes that each member was permitted to sell. These were in large part political measures designed to regulate relations both within and among guilds, but also at a broader level to safeguard the 'moral economy' and prevent speculation.

Civic inspectors tested the public weights, oversaw large-scale wholesale contracts and visited the *botteghe* twice a year to sanction the quality and rigour of the pharmacist's workmanship and ingredients stored. In the Florentine case, an independent guild of

¹⁴³ Witold MAISEL, 'Jan Bocian, nieznany żeglarz poznański', in *Przegląd zachodni*. (miesięcznik) Rocznik X, t. III, no. 9-12, (1954), 214.

¹⁴⁴ *Pharmacy. An Illustrated History*, 70-, more specifically, Antonio E. VITOLO, *Gli statuti speciali Italiani con particolare riguardo alle leggi della Repubblica Veneta*, Pisa (1958) and Armando LAGHI on the 'Statuta Civitatis Urbini de Aromatariis' in *Atti del Quarto Convegno di Studi della Associazione Italiana di Storia della Farmacia*, Varese, 3-4-5-6, 1959, ed. Antonio Esposito, Milano, Pisa (1961), 580. Also H.E. USSERY, *Chaucer's Physician: Medicine and Literature in 14th century England*, New Orleans (1971). DOI: 10.2870/92585

intermediaries, the Sensali delle Arti, was engaged to oversee wholesale trade and weigh the spices publically.¹⁴⁵ For some preparations, the apothecaries were obliged to exhibit the ingredients publically for three days prior, while in Milan no theriac was to be sold that did not bear the seal of one of the four official *controllori*.¹⁴⁶ False and adulterated spices were burnt on discovery by the civic goods' inspectors often with the offenders; the strictest regime of all seems to have been the *Gewürzschau* instituted in Nuremberg between 1441-1797, where Hans Kölbele, Lienhart Frey and an unnamed female accomplice, all implicated in falsifying saffron, were buried alive in 1456.¹⁴⁷

The retail trade, as we have seen, was strongly protected as much as promoted by civic interest. There was, however, one level of trade still further down the hierarchy, perhaps the very last. Here we reach the wandering salesman or pedlar who supplied areas and consumers who were unable to make it to the nearest markets. They peddled all kinds of wares, 'offering the ordinary man commodities such as fabrics, spices and other indispensable goods right on his doorstep', as their trade was defined in a complaint to the Imperial Diet.¹⁴⁸ They themselves were predominantly a marginalised group outside of society, either displaced villagers from the highland areas, foreigners or, as was typically the case particularly to the east of Brandenburg, Jews.¹⁴⁹ Often they were deliberately prevented by the local bourgeois communities from establishing themselves in the towns at the instigation of hostile native tradesmen - as was the case with Jewish traders in Nuremberg, who were forbidden by law to trade spices by weight or from selling wine or beer to Christians - they were firmly confined to a tenuous living at the margins, ever the subject of vagrancy charges and in trouble for disrespect of public holidays and dubious business practice, forbidden to retail and ordered instead to present themselves twice weekly at market.¹⁵⁰ An official report of 1753 concerned with Transylvanian pharmacies drew attention to numerous fatalities caused by

¹⁴⁵ ASTORRI, *Il libro delle senserie di Girolamo di Agostino Maringhi sensale dell'Arte degli Speziali, 1483-9*, tesi depositata nella Facoltà di Lettere, Firenze (1987).

¹⁴⁶ *Per una storia della farmacia e del farmacista in Italia*, § II 'Venezia e Veneto', ed. Angelo Schwarz, collana Schiapparelli, Bologna : Skema, (1980).

¹⁴⁷ cited by FLÜCKIGER & HANBURY, *Pharmacographia: a history of the principle drugs of vegetable origin met with in Great Britain and British India*, (1874), 603.

¹⁴⁸ as cited by P. GUICHONNET, 'L'émigration alpine vers les pays de langue allemande', in *Revue de géographie alpine* (1948), 558.

¹⁴⁹ Ludwig DAVIDSOHN, *Beiträge zur Sozial- und Wirtschaftsgeschichte der Berliner Juden vor dem Emanzipation*, Berlin: Hause (1913), 50 ff. and, more specifically, F. PRIEBATSCH, 'Der Märkische Handel am Ausgange des Mittelalters', *Schriften des Vereins für die Geschichte Berlins*, XXXVI, 1-54 esp. 19f.

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see Laurence FONTAINE, *History of Pedlars in Europe*, Polity Press (1996).

unregulated drugs containing toxic substances such as mercury and arsenic peddled by wandering Greeks, Jews and Armenians.¹⁵¹ If pedlars were denounced as a threat to domestic security, equally were they prey to violent crime. The Portuguese chronicler Fernão Lopes relates how Dom Pedro's (1357-67) squires robbed and killed a Jew who went through the mountains near Belas selling spices and other things.¹⁵²

¹⁵¹ report dated 5 February, 1753, *Gubernium Transilvanicum in politicis*, 260/1753; Budapest State Archives and cited by E. CRISAN, *Materia Medica de Transylvanie*, 59.

¹⁵² Halikowski Smith, Stefan (2001) Portugal and the European spice trade, 1480-1580. Fernão LOPES, *Cronica de D. Pedro*, ed. Antonio Borges Coelho. Lisbon: Livros Horizonte (1977), ch. VI. DOI: 10.2870/92585

7. TYPES OF BUYER: BY SCALE, FUNCTION OR NATIONALITY?

We have traced the Portuguese crown sales policy for colonial goods over the period in question and seen through what kind of market mechanisms spices were sold. We have presented the consortia that negotiated with the Crown for oriental spices. In this chapter the nature of this relationship shall be analysed a little more formally, which might conveniently be approached in terms of scale or significance of the interaction, in terms of the buyer's business strategy, or simply his nationality.

Of course, one could reduce all business strategy to a common ethic of trade; the merchant was, in Guicciardini's words, 'moued with desire of unsatiabable gaine', he was a profit-seeker. As regards the King's position, this is not so sure. Profits were of course important - Jerónimo Frescobaldi was entitled in royal correspondance *arrematador*, the 'highest bidder' for spices from 1511 - but Duarte Leite has pointed us in another direction, suggesting that the Crown was more interested in establishing long-term partnerships ensuring a regular revenue for the benefit of administrative stability.¹

There are other factors at play. There is clear evidence of all parties trading with the Crown jostling for privilege and at the same time independence within the imperial structure. The Affaitati manoeuvred within the sugar trade as much as possible with their own agents, negotiating their commissions through the Capellani on Madeira rather than officials of the Portuguese Crown, and thereafter exporting to a privately owned refinery on Rue des Dominicains in Antwerp which they had bought on 17 July 1555.² The delivery would imaginably have shirked trans-shipment as Lisbon and hence a double payment of tithes, a repeated source of complaint at the Portuguese Côrtes.³ In the sphere of precious stones, the Affaitati specifically employed a German diamond cutter Franz Mesingh.⁴ Perhaps one could say in Marxist mode that as much as the means of production as possible were appropriated by the firm.

¹ letter from Ruy Fernandes, 24 March, 1517, published as doc. XI in BARATA, *Rui Fernandes de Almada, diplomata português do século XVI*, (1971); D. LEITE, *História dos descobrimentos*, (1958), II, 162.

² deed in *Actes Scabinaux d'Anvers*, 1555, 2 Wes. Graph., pp. 79/80, Stadsarchief Antwerp.

³ Almirante ALMEIDA DE EÇA, *Normas Económicas da Colonização Portuguesa até 1808*, Coimbra (1921: Imprensa da Universidade). A complaint of this kind was voiced at the Cortes that convened at Evora in 1481, published in *Archivo dos Açores*, Ponta Delgada, (May 1878-), vol. III, 10.

⁴ see Charles VERLINDEN, 'Quelques types de marchands italiens et flamands dans la Péninsule et dans les premières colonies ibériques au XVe siècle', in Hermann KELLENBENZ, *Fremde Kaufleute auf der Iberischen Halbinsel*, Cologne/Vienna (1970), see also S. BERTELLI, Giovan Battista & Giovan Carlo Affaitati, entry in *Dizionario Biografico degli Italiani* (1960).

We should nonetheless be careful not to concoct take-over strategies for the sixteenth century firm. The scale of the Indies trade necessitated a certain partnership. And the case of the German firms after the Almeida fleet débâcle shows how easily interest in overseas enterprise could switch its attentions.

7.1. A question of scale.

Braudel is fond of citing Paul Adam, who served to remind him how capital, instead of clustering in agriculture where profits 'are dispersed in small sums, where they get lost in the nooks and crannies of everyday life', was rather to be found in long-distance commerce, restricted to the hands of a very few merchants.⁵ The situation was no doubt exacerbated by the monopolistic nature of the subcontracting as far as the spice trade is concerned, Guicciardini observing how the few were sufficiently restricted and collusive to be able to keep up European market prices (*per forza de questi grandi del contratto*), and for Materné to estimate that the top ten merchants represented at least a third of the combined value of exports from Antwerp.⁶ It was also a commonplace that the King preferred to deal in sizeable and singular sums rather than a trickle of small lots.⁷ For it was in his interests as we have just suggested that he regularise imperial exchange as much as possible so that the administration operated smoothly; we have also seen how larger consortia were able better to provide the sheer quantities of goods and capital needed to maintain imperial commerce and how they alone could agree to function on down-payments in advance. Thus it was that on one occasion, the King, having encouraged Lucas Giraldi to tender a pepper contract, withdrew and ordered the pepper to be sent on to the Feitoria for sale, as Giraldi's offer was too petty to be worthy of further consideration.⁸ Only when negotiations with larger consortia fell through, did the King turn to smaller companies. This was the case on Tomé Lopes' visit to southern Germany at the beginning of 1515: when the Fuggers turned away, Lopes was obliged to salvage something, signing a short-term contract of six months with lesser cartels

⁵ 'se dispersent par sommes menues, se perdent dans les abîmes de la vie quotidienne', Paul ADAM, *Les inventions nautiques, médiévales et l'émergence du développement économique moderne*, thesis dactyl. (1980), 58 cited in F. BRAUDEL, *L'identité de la France*, Paris (1986), vol. 3, 318.

⁶ J. MATERNÉ, in *C.G.E.R.*, 176.

⁷ 'le Roy aime mieulx à vendre à grosse somme une fois que de le vendre par petites parties', 'Copie d'un billet', in *Antwerpsch Archievenblad*, 215-217.

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⁸ *Letters of John III*, ed. J. Ford, Cambridge Mass. (1931), 317 ss & 327 ff.

prepared to set sail for Lisbon immediately with silver.⁹

What of those silent upstarts, some High and Low German, others indigenous to Antwerp, among them the banker Nicolas Jonghelinckx, the Aachen families of Van Rechterghem and Schetz, also the Pruynen and Vleminx, who challenge the long-held opinion that trade at Antwerp was between foreign merchants alone?¹⁰ They, as outsiders, were concertedly lobbying the Portuguese King for the broadening of his contracting base arguing that smaller contracts with shorter validity and higher contracting prices would be more in his interests, that he would have a larger capital base at his disposal, that trade would flow from Lisbon rather than Antwerp; in their pleas they were supported by the Spanish, who themselves were pushing out of their own interests for a democratising of the spice trade.¹¹

This would appear in any case to be the level of audience which Meder addresses, merchants who, if contractors, performed to a single transaction, with the terms of exchange simple and direct. But we might like to think of them not in terms of function, but scale of operation. This is not easy to assess: while Diogo Mendes' assets were estimated at between 3-4 million ducats - if sources are to be believed - other important *contratadores*' capital, such as the Welsers, came to 667.000 florin (c.333.500 ducats) in 1554, while the Affaitati assessed their operating capital at 130.000 ducats in 1568. So, even among the *grandi del contratto*, capital holdings differed by a factor of as much as twenty. But we might presume to find the lesser contractors we have just considered midway between the Affaitati, say, and a merchant like Joachim Finold of Nuremberg, who held a prominent position in the wholesale spice trade at Leipzig, importing from the Frankfurt fairs and even Antwerp and was estimated to regularly operate with goods valued at 20.000 florins.¹²

7.2. Contractors (*Contratadores*) and Buyers (*Compradores*).

⁹ letter of 29 May, 1515, from Lourenço Lopes at Antwerp to D. Manuel, A.H.P., doc. 130.

¹⁰ EHRENBERG, *Zeitalter der Fugger*., I, 363.

¹¹ proposals to Rui Fernandes in February 1520, cited by H. KELLENBENZ, *Briefe über Pfeffer und Kupfer*, 222 & 225.

¹² DELUMEAU, *La Civilisation de la Renaissance*, (1967), 256; GORIS, *Etudes sur les colonies marchandes méridionales*, 200; for Joachim Finold, see FISCHER, *Aus zwei Jahrhunderten Leipziger Handelsgeschichte*, 222. For the Welsers, see Hermann KELLENBENZ, 'Das Augsburger Unternehmen der Welsers und Nürnberg', in *Meder'sches Handelsbuch und die Welsers'schen Nachträge*, ed. H. Kellenbenz, Wiesbaden (1974), 93. It seems that 200.000 gulden was equivalent to 100.000 cruzados, since from the mid-15th century 6 gulden = 1 livre de gros (Weegy and according to NUNES DIAS, in February 1516, 3 libras were equivalent to 1 cruzado, O *Capitalismo Monárquico Portugues*, vol. II, 309. DOI: 10.2870/92585

There are significant and readily recognisable differences in the respective type of purchaser of spices negotiating with the Portuguese Crown, of whom we might conveniently distinguish the contractors from the straightforward buyers, or in the language of the time, the *contratadores* from the *compradores*.

The contract, as we have seen, engendered a very particular kind of commercial relationship, one that demanded a high degree of risk-taking in both physical terms (storms, pirates etc.) and in terms of trust (the reliability of early modern monarchies), as well as the immobilisation of large sums of capital over protracted periods of time. On the Indies trade, down-payments were required by the Portuguese Crown in good time in order to pay for the kitting out of the Portuguese fleet, which would then be gone for up to eighteen months before any returns could be made on the spices it brought back.¹³ Otherwise, contractors had an option, at least officially until 1507, to send their own ships, but as the Augsburg merchant Hans Baumgartner the Young estimated, the arming and fitting out of a ship for the Indies could easily amount to 10,500 Rhenish florins (c. 7540 cruzados).¹⁴ Profits here could be and were, particularly initially, extremely high, but the risks were likewise.

The uncertainty inherent in agreements where payment was made up front for such valuable yet qualitatively divergent goods inevitably led to ferocious speculation. Certainly, given the fixed price sales system that the Portuguese inaugurated from 1505, the play would seem to be all with the contractors. But this didn't privilege them *a priori*. In fact, the complexities of the sales game make it seldom clear who were the winners, or the losers of such speculation. Spices were regularly sold on to secondary buyers even before these goods were unloaded at Antwerp or Nuremberg - a form of futures market - just as the official re-export contractors of the Crown committed themselves to the movement of certain stipulated quantities in advance.¹⁵ Speculation, it seems, was conducted from all sides, and at nobody's pre-established expense though, given the multiple sources of supply, Mauro is bold enough

¹³ 'Relazione di Leonardo Ca' Masser alla Serenissima Repubblica di Venezia sopra il commercio dei Portoghesi nell'India dopo la scoperta del Capo di Buona Speranza (1497-1506)', in *Archivio Storico Italiano*, appendix, tomo II, Firenze (1845), 23 & 28-29 and Privilege of August 30, 1509. The Welser, for example, paid 7.000 cruzados in advance for the three contracts they entered into before 1516 regarding purchase of pepper, A.N.T.T. C.C. I, m. 19, doc. 111. I cannot thus understand what Afonso de Albuquerque was referring to when he accused foreign merchants of 'se fazem pagos de ante mão do vosso [i.e. a Vossa Majestade] cofre', in *ibid. Cartas para El-Rei Dom Manuel*, 103.

¹⁴ cited by Henri BRUNSCHWIG, *L'Expansion Allemande Outre-Mer du XVe siècle à nos jours*, Paris (1957), 22.

¹⁵ 'Afirma-se que alguns destes tratantes venderam a pimenta, antes que a tirassem da Casa, a XX cruzados e quarto e que já a deram a XVIII e a termos com parte em mercadoria por averem logo o dinheiro da primeira paga', Estevão Vaz to D. Manuel, October 11, 1510, Lisbon, C.C., pte Ia, m. 9, doc. 79. Halikowski-Smith, Stefan (2001) Portugal and the European spice trade, 1480-1580. European University Institute. DOI: 10.2870/92585

to suggest that spices were a buyer's market, 'a consumers' market. . where the buyer was the master'.¹⁶

Contractors on the spice trade enjoyed far greater access to commercial opportunities elsewhere in the Empire than *compradores* did, not simply as a result of their capital, but partly as a function of their proximity to the King and the delegating authority, partly as a result of the exchange of more generalised services one made with the other. Long-standing contractors, for example, were called upon by the Crown to advance money, for the *praças* in Africa and, in 1521, they helped pay the dowry of Dona Béatrice of Savoy.¹⁷ Other loans to the Portuguese Crown are signalled with respect to the years 1508-10 and 1511-14, and Italian contractors were the first recourse for letters of exchange needed to subsidise Portuguese missions and trading factories abroad, and even acted as couriers of royal correspondence on the Flanders run.¹⁸ The Portuguese ambassadors to the Holy See were instructed to draw on Giovanni Battista Cavalcanti, who had married into the Giralaldi family; payment was made to Lucas in Lisbon in pepper.¹⁹ The Crown often resorted to paying contractors in sugar: on 12 August 1518, J.F. Affaitati was paid the King's fifth in Madeiran sugar by João Saraiva at the customs house of the *almoxarifado*; this was the case in 1511 equally when Francisco Álvares and Francisco Dias were sent to the isle to collect all previous debts for the purpose of paying off the Affaitati.²⁰ Contractors were even roped into underwriting certain civic functions otherwise provided for by the Crown: the Affaitati were asked to finance the Casa da Supplicação out of the proceeds from pepper contracts.²¹ Everywhere, contractors played a far more prominent role in the Portuguese overseas

¹⁶ EHRENBERG, 'Speculation in Antwerp', *Capital and Finance in the Age of the Renaissance*, bk. II, ch. 1, 239 ff; 'un marché de consommation. . où l'acheteur était le maître', MAURO, *Le Portugal et l'Atlantique au XVII siècle*, 501.

¹⁷ VITERBO, F.M. de Sousa. 'O dote de D. Beatrice de Portugal, Duqueza de Saboya', in *A.H.P.*, vol. VII, 118, Lisbon (1909). But I am wrong to think that Italian merchant-bankers offered the Crown debt help whereas the Germans didn't; apparently the Fuggers loaned the Crown money for João III's sister's dowry, see K. HÄBLER, *Die Geschichte der Fuggerschen Handlung in Spanien*, Weimar (1897), 30.

¹⁸ as, for example, was the case with a letter written by Rui Fernandes from Brussels on 6 May, 1516.

¹⁹ with regard to loans, see the entry under Giovan Francesco Affaitati, *Dizionario Biografico Italiano*, 351, (1960). Letters of exchange drawn on Giralaldi's correspondents in Castille are signalled in *Letters of John III*, 152 and RAU, *Um grande mercador-banqueiro italiano em Portugal: Lucas Giralaldi*, footnote #32, 11; those on the Cavalcanti are mentioned in *Corpo diplomático português, conteúdo os actos e relações políticas e diplomaticas de Portugal com as diversas pôtenças do mundo*, ed. L.A. Rebello da Silva et al., Lisbon (1862-1910), VIII, 415.

²⁰ C.C., m. 84, doc. 39; *alvará regio* at C.C. pte. 4, m. 27, doc. 165.

economy as a result of their capacity to organise trade and deal directly with the King.

Contractors were rewarded not only by greater access, but more favourable terms on which to trade than anonymous *compradores*. In fact, often it was the contractors themselves who demanded special treatment. This we can see in Lucas Giraldi's demands to be exempted from *dízima* payments on his Brazilian trade, or the Affaitati's refusal to pay the obligatory tithes to the Portuguese *feitoria* in Antwerp, even though the ships they had been using, even the mark on the sacks of goods, were those of a Portuguese national.²²

Contratadores did not merely re-sell to third parties on the Antwerp market in bulk, if splitting up the cargo into lots, as Ehrenberg had once led me to believe.²³ The Affaitati, for instance, on one occasion between 1531-34 both loaded and insured, in conjunction with other *armateurs*, ships sailing from Zeeland to the Baltic.²⁴ Contracting consortia influenced the market further down the trade chain, cooperating with smaller consortia that emerged in their shadow and to whom national markets were apportioned. This, it seems, was the way the Affaitati-Mendes consortium operated. There was, ultimately, nothing very new in this: such was the case for the alum trade or that of copper by the end of Maximilian's reign, split between the Fugger (who sold to the Low Countries and the Hansa) and the Hochstetter (who took southern Germany and Italy).²⁵ In the second half of the sixteenth century, however, with the ever larger consortia, market assignment for spices was much more self-evident, as in the case of the Rott contract. In any case, by virtue of their privileges and the nature of their restricted trade, contractors were able to wield considerable power over the international market in a similar way, if not to quite the same degree, as the restricted number of wholesale traders over the regional and local markets.

In terms of freight, there seems to be no clear trend distinguishing *contratadores* from *compradores* above a certain scale of operation, though it is clear that contractors had more possibilities available to them. Thus if the Marchionni group bought three old *naus* from the King for participation in the Almeida fleet of 1505, in 1508 it was the King's turn to buy the *nau* Santa Marta and the caravel San Salvador from João Francisco and the Affaitati group. It is not certain that the Fuggers, operating from landlocked Augsburg, possessed or even

²² for Giraldi, see A.N.T.T., Gavetas, X, 1-12, signalled in A. da SILVA REGO, *As Gavetas da Torre do Tombo*, 12 vols., Lisbon (1960-64) as #1620, 582; for the Affaitati, see C.F.P.A., caixa 4, maço 5, docs. 11 & 14.

²³ EHRENBERG, *Capital and Finance...*, Bk. II, ch. 1, 239.

²⁴ J. DENUCÉ. *Inventaire des Affaitati*. .. sect. #7. Is this a standard medium for re-export used by the Affaitati?

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²⁵ Pierre JEANNEAU, 'Les Fuggers and the Hanse', *Annales*, apr.-juin (1955), 229-36

commissioned their own ships even on the *trato da Europa*: in 1507 they used a ship on the Lisbon run registered in Arnemuiden, in 1510 a ship belonging to a certain Pierre Leroy, probably French, and in 1513 they transported spices from Lisbon in the bottoms of a certain Gerard Tappe of Reval.²⁶ Following the 1505 decree, it was not strictly in contractors' interests to own, since the King had stipulated that owners of the spice contracts would be levied a 5% duty if they exported on their own ships. But their contacts with the Hanse - despite poor official relations between the polities they represented - meant that they could readily find shipping when it was needed. In 1551, the Conde da Castanheira negotiated with the Fugger for providing the Crown with already fitted out new ships. *Compradores* like the della Faille or the Despars meanwhile provided their own shipping, though smaller companies often did not have the capital to acquire their own vessels. They rented for the occasion, or like the Arnemuiden merchant Willem Kestelt, otherwise known as Willem van Belle, they owned a part of a ship dedicated to the Lisbon run for a given period.²⁷ Exporters at Antwerp like the Imhoff, who transported by land, afforded the new, long-distance carriers that emerged at the beginning of the sixteenth century.

Compradores in essence were restricted to more passive transactions: the Grosse Ravensburger Handelgesellschaft, which decided to centralise its spice purchases in Antwerp only in 1507, would be temptingly described as a 'passive' buyer, as would a host of forgotten medium-sized merchants such as Balthasar Fischeidt of Cologne or the Antwerp merchant Johann de Champs, who regularly bought quantities of up to 20.000 florins through established market mechanisms such as the Engelsche pond, or at the twice annual Antwerp fairs.

A number of firms, particularly Flemish ones with shipping readily at their disposal, bought minor consignments of Portuguese spices directly from Portugal alongside more traditional cargoes of wine, olives and figs with perhaps a good load of sugar and non-commissioned imperial goods like malagueta, or ivory. In some cases, one comes away with the impression that such companies were primarily looking for sales' outlets for goods they had brought with them on the outbound leg; the charging of the *omnes condimentorum species quibus hic caremus* was offered as a service almost to the Portuguese authorities. This is how things are presented in the correspondance between the city of Danzig

²⁶ R. DOEHAERD, *Études Anversoises*. ., 256-59, nr. 1780 (26.I.1508); *Bronnen*. ., #477; from Stadarch. Antwerp, *Scheper-brieven*, no. 139, fo. 120r (no. 3642); DOEHAERD, *ibid.* vol. III, doc. 3642.

²⁷ the reference to Willem Kestelt has been taken from Eddy STOLS, 'Os mercadores flamengos em Portugal no Brasil antes das conquistas holandesas' in *Anais de História, Assis* (1973), V, 12. DOI: 10.2870/92585

and King of Portugal in the 1550s, in which the primary issue of negotiation were the *impostos* on northern cereals, and the facilities for their storing in Lisbon.²⁸ Such a position would seem to be borne out by the facts: there is reference to a number of shipments of Danzig wheat eagerly awaited by the Portuguese, such as that of the *David* in 1561, but which never arrived as a result of its captain's finding excellent prices in ports *en route*.²⁹

Many of these firms, like the della Faille, even had a permanent trading agency in Lisbon, usually staffed by company apprentices. It seems that it was important to maintain such an agency: in 1534, a merchant of Cologne resident in Lisbon informed the city of Lübeck that some of its merchants had been deprived of exercising their privileges on the justification that privileges were extended to resident factors in Lisbon whose annual transactions amounted to more than 10.000 ducats a year.³⁰

Many companies who regularly bought consignments of spices in Lisbon took a keen interest in the sugar industry on the mid-Atlantic islands of Madeira and the Canaries. They used their own Flemish representatives in the islands, chiefly as commercial go-betweens with the large sugar plantation owners (*plantadores*): the Despars company operating from Bruges between 1480-1500 worked through Luis Gallant and Theune Leuf on Madeira.³¹ A few of these representatives even became cultivators in their own right.³²

But, despite the apparent size or range of this strain of *comprador* company structure, the cost of the jump up to spice trading was, as we have seen from the *ciclos de negocio*, a massive one; so that if spices do appear amongst their cargoes, then they were only ever a secondary load picked up at Lisbon alongside other goods on the long Atlantic haul up to north European markets, as was the case with the sugar merchants Juan and Alonso de Palma in 1567.³³ Indeed, my research on company registers has led me to conclude that those firms

²⁸ see, for example, letter of Sigismundo Augusto of Poland to Dom Sebastião, 2 May 1564, cited in DÜRRER, *As Relações Económicas entre Portugal e a Liga Hanseatica*, 59.

²⁹ *Danziger Inventar*, no. 3822.

³⁰ *Kölner Inventar*, vol. I, 1531-71, no. 81.

³¹ O. MUS, 'De Brugse compagnie Despars op het einde van de 15e eeuw', in *Handelingen van het Genootschap voor Geschiedenis "Société d'émulation" te Brugge*, vol. CI, (1964), pp. 5-118.

Equally, the company set up by Guillaume van de Lare in 1524 dealt with Jehan Diaz Flamengo and Pierre Dorroit of Bruges. Guilhelme de Lara's trading ventures have been described in the *Livro de Caixa*, Arquivo Plantin-Moretus, ms. 318 and in STOLS, *Os mercados flamengos em Portugal*, in *Anais de História*, 14-15.

³² Luis, son of João Gonçalves Malacarne, who had served Gerard van Gistel. VAN HOUTTE & E. STOLS, 'Les Pays Bas et la 'Méditerranée Atlantique' au 16e', in *Mélanges en l'honneur de Fernand Braudel*, Toulouse (1973), vol. I, 645-659.

³³ Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580

who approached the Portuguese King as *compradores* limited themselves to imperial goods of the second cycle, and primarily sugar, which was at its own level a dynamic market, but one that extended at best to Madeira and failed to embrace the whole world. Beyond this, the big contractors tried to assert exclusive rights to the trade, both legally and institutionally.

I think the notion of *ciclos de negócio* (see section 3.5.) and the metaphor of the trading pyramid is a very apposite one. Contractors involved in the spice trade invariably built up their commercial success upon goods of the first, but more commonly the second cycle of trade, from which they could launch themselves into the trade for spices. It was a pyramid in the sense that these second cycle goods continued to act as the support to the risky involvement at the highest level of commercial enterprise. We find this structure with the Giraldi, the Affaitati, with the Mendes group, but also the Burgos consortium, which continued to deal in sugar, as we have seen, but also in other semi-colonial products such as woad.

Compradores of spices, in conclusion, tended to find themselves further down the trading hierarchy, which meant a role at Antwerp, like for Nicholau van Rechterghem, a kind of central place trading, or else, for those companies actively involved in shipping, picking up smaller consignments at Lisbon. Their's was not, in Braudel's words, the 'perspective of the world', but one of regional re-distributors; and we find *compradores* - buyers - right the way down the trading chain, as wholesalers, even retailers. Contracts were basically unnecessary, they bought directly from the market, paid on the spot, or settled up at the end of the fair; it was not a trade that shaped the market, but rather depended on it.

7.3. The binding significance of nationality: High German and Italian firms' histories of engagement in the Portuguese spice trade.

To what degree did the buying strategies and the company structure differ as a function of their nationalities, in which we are concerned primarily with High German as oppose to Italian? Nationality, as we have seen in Chapter 6, was after all one of the fundamental principles by which spice consortia in the period up to the 1550s were drawn together. Lucas Rem, for example, went to Lisbon in 1504 to sign a contract with the Portuguese Crown on behalf of not only the Welsers, of whom he was in the pay, but also the Fugger and the Höchstetter families. More close still were the ties of a common city of origin. It was established practice that whichever merchant was returning to the home city

would carry letters and small consignments of goods on behalf of his colleagues.³⁴ And closer still was the immediate link of kin operative both within the company. Hans Stromer, who died in Lisbon in 1490 after serving as a factor to the Gruber was an in-law of another merchant family of Nuremberg, the Holzschuher, of which Karl had married Gerhaus Gruber, and whose son Hieronymus Holzschuher, painted by Albrecht Dürer, married the daughter of Hieronymus Münzer (Münster) who had himself been to Lisbon in 1499, bequeathing us a famous account of his visit.³⁵

These were the respective concentric circles of identity (nation (*natio*)/city (*civitas*)/kin (*familia*)) out of which the commercial companies of the sixteenth century were weaved. But it is at the level of common nationality that differences emerge most clearly for the purposes of our comparison. Jean Delumeau has drawn attention to the fact that the Italian tradition was for *compagnies à filiales* each operating with a large degree of autonomy, whereas the High Germans kept to a more rigid structure with stronger allegiance to an overall head based permanently in the town of origin, the structure of which might be described as a *compagnie à succursales*.³⁶

This typology is immediately demonstrable as far as the High German firm trading with Portugal was concerned. Anton Fugger directed the company in all its affairs from Augsburg, just as his uncle Jakob had done; he retained complete control of the concern and had to give no account of profits and losses to his junior partners, his nephews, who were obliged reciprocally to render unquestioning obedience to him.³⁷ Orders were sent out. Thus, for example, on the occasion of Jakob Groenberger's commercial visit to Lisbon 1506-07, instructions had been received from Cologne boss Johann Byse des Mittleren, and goods sent from a factor in Antwerp. It is moreover a telling fact that this dynamic refracted through Antwerp and thence via the Atlantic, rather than shape itself as a simple extension of

³⁴ see, for example, the correspondance relating to the dispatch of a green parrot from Lisbon by Friedrich Imhoff to Martin Behaim in Nürnberg in March 1519. The parrot was received in Antwerp by Fritz Krausperger, an agent of the Hirschvogel, and forwarded thereafter *mit dem Nürnberger Boten*, clearly some kind of regular courier. See KELLENBENZ, 'Die Beziehungen Nürnbergs zur Iberischen Halbinsel, besonders im 15. und in der ersten Hälfte des 16. Jahrhunderts', in *Beiträge zur Wirtschaftsgeschichte Nürnbergs*, ed. Stadtarchiv Nürnberg, Bd. I, Nürnberg (1967), 474.

³⁵ Baron Wolfgang Stromer VON REICHENBACH, *Die Nürnberger Handelsgesellschaft Gruber, Podmer, Stromer, ein bedeutendes nürnbergers Fernhandelsunternehmen in der Mitte des 15. Jahrhunderts*, Nürnberg: Verein für Geschichte der Stadt Nürnberg, (1963).

³⁶ Jean DELUMEAU, *La Civilisation de la Renaissance*, Paris (1967).

³⁷ EHRENBERG, *Capital and Finance*, 97. This system seems to have broken down from 1552 with the ever more independent undertakings of Fugger agent Matthew Oertel, who started to negotiate for large loans to the
Hankowski-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
 Brussels: Cop and archive.org
 http://www.archive.org/details/
 Brussels Court and Trade Company initiative. *ibid.*, 113.

traditional interests, chiefly the saffron trade, in eastern Spain.

Delumeau's notion of *compagnie à filiales* applies equally accurately to the circumstances of, say, the Affaitati Company. Thus, for example, regarding the salvage of a shipwrecked ship off Zeeland, the proceeds were divided equally between the Antwerp branch and Jean-Pierre's heirs.³⁸ 'Filiale' is indeed even the term of reference cited in the correspondence with the head of the company, Luca, who managed affairs from Cremona.

What were the implications of this distinction? To begin, the *compagnie à succursale* structure mitigated against setting the German *Kontore* on a permanent footing in Lisbon, as much of the business was carried out by agents sent from home rather than *in situ*. A number of German factories in Lisbon seem to have been closed up as early as the 1520s when evidence of Upper German trading activity in the city appears to have slowed right down; the Imhoffs are not to be heard of after 1523, and Lisbon is not included amongst eighteen trading branches (*Niederlassungen*) listed on the Fugger balance sheet of 1527.³⁹ When the Augsburg Christoph von Stetten arrived in Lisbon in the autumn of 1530 with instructions, amongst other things, to close the Herwart factory, which had been the biggest representation of High German trading interests in Lisbon over the '20s, he commented that 'Germans are hardly to be found in the city' (*befanden sich die Deutschen gar nicht in der Stadt*).⁴⁰ A good part of this, of course, had nothing to do with company strategy, but rather the domestic circumstances in Portugal which were marked by increasing xenophobia and strong anti-Protestantism particularly under Dom Sebastião. But certainly the company structure, which mitigated against permanence and assimilation, rendered the German trading community more fragile and prone to the changing political circumstances than was the Italian.

The lack of a permanent representation in Lisbon inevitably inhibited the development of the kind of rapport the Italian, and particularly the Florentine companies enjoyed with the Portuguese Crown. Bartolomeu Marchionni, described by Ca' Masser as 'he who makes the greatest dealings in the city of Lisbon' (*quale fa grandissime faccende nella città di Lisbona*) and estimated the biggest single lender to the Portuguese Crown at the beginning of the

³⁸ fol. 178 of the Grand Livre D of the Affaitati inventory, see DENUCÉ, *Inventaire des Affaitati, banquiers italiens à Anvers, de l'année 1568*.

³⁹ a number of German merchants nonetheless asked for their privileges to be renewed, which was granted to them according to 'a carta dada em Almeirim' on 26 June 1526, see A.N.T.T. 'Privilégios a Mercadores Alemães', Manuscritos da Livraria, no. 2253.

⁴⁰ KELLENBENZ, 'Imhoff', *Dicionario de Historia de Portugal*, ed. J. Serrão (1968); the Fugger balance sheet is covered by EHRENBERG, *Capital and Finance in the Age of the Renaissance*, 87-89. On Stetten, KELLENBENZ, *Die Beziehungen*, (1967), with citation from *Stetten Jahrbuch MCML, II. Bd., Deren von Stetten, Geschlechterbuch, MDCCCXVIII*, ed. Albert Hammerle (1950), 57 ff. DOI: 10.2870/92585

sixteenth century had been conceded Portuguese nationality in 1482.⁴¹ Francesco di Parigi Corbinelli, son-in-law of the same Marchionni, was appointed by Albuquerque the first factor of Goa in 1510, a position which he held, with a minor interruption, until 1521, and another Tuscan merchant of the same epoch, Giovanni da Empoli, served briefly as Portuguese factor at Pasai in northern Sumatra.⁴² Lucas Girdali was given special dispensation to sail to India, as captain of his own nau, and was later honoured as *fidalgo* of the Casa Real. João Francisco Affaitati, on first name terms with the Portuguese monarch, married each of his children into the Portuguese aristocracy: Cosimo to D. Maria de Vilhena, Agostinho to D. Maria de Távora, his daughter Madalena to D. João de Sande and Inès to D. Leonardo de Sousa. João Francisco's heirs were given forthcoming careers in Portuguese overseas service. Francisco Affaitati was given command of the *Santa Maria de Mirandela* in 1584; whereas Cosimo de Lafetad (also known as Cosme Lafetà) led and was decorated for his role in the conquest of Mont Chaul, and later reached the summit of his career first as Capitão-mor of Cochim in 1598 and then as Counsellor of State to the government of Goa.⁴³

By contrast, I know of no intermarriages from the history of the German community, though there are, perhaps, other measures of social integration. The royal title of knight had been conferred upon Martin Behaim in 1486 and on Wolfgang Stromer, who had excelled himself on the battlefields of North Africa, in 1503. It has been suggested that Hans Stromer (d. 1490) was nominated *Ritter und Zeugmeister* of the Portuguese King.⁴⁴ But these are the last honours Germans apparently received at the Portuguese court, at least until Ferdinand Cron was made *fidalgo da Casa del-Rei* in 1609.

In their trading missions to Lisbon, German merchants did not communicate personally with the King; they were constrained, somewhat awkwardly, to trade through a courtier, who had been nominated jointly by the Crown and the German community, and whose signature (*pubrico synall*) was required to be attached to any contract. He also served as notary (*tabelião*) and interpreter of the nascent German colony in Lisbon and took a share of any

⁴¹ Armando CASTRO, *História Económica de Portugal*, 170.

⁴² V. RAU, 'Um florentino ao serviço da expansão ultramarina portuguesa: Francisco Corbinelli', *Memórias do Centro de Estudos de Marinha*, 4, (1974); Empoli later did a lot to initiate trading relations with Bengal, see G. BOUCHON & L. FILIPE THOMAZ, *Voyage dans les Deltas du Gange et de l'Irraouaddy. Relation Portugaise Anonyme (1521)*, (Paris, 1988).

⁴³ P. PERAGALLO, *Cenni Intorno alla Colonia Italiana in Portogallo*, Genoa (2 ed., 1907).

⁴⁴ GHILLANY, Friedrich Wilhelm, *Geschichte des Seefahrers Ritter Martin Behaim nach den ältesten vorhandenen Urkunden*. Nürnberg (1853). With respect to the Stromer, see BIEDERMANN, *Geschlechtsregister des Patriziats Nürnberg* (1748), Tafel 178 & 460 and Anselmo Braamcamp FREIRE, *Armaria Portugalense* (1917), 134-46.

dealings in his capacity as official broker (*coretor*). Since 1503, the position had been accorded the Moravian printer Valentin Fernandes.⁴⁵

German merchants, equally, had to seek recourse to written privileges which they were strongly encouraged to keep with them at all times; even then, there is substantial evidence to suggest antagonism with the host population, from which German property was for a time defended by civil militias, and frequent confrontations with the Portuguese authorities, who were unwilling to implement the privileges.⁴⁶ Royal decrees were repeatedly issued to Portuguese Justices-of-the-Peace (*corregedores*) reminding them that German merchants living in Lisbon must be treated in all circumstances as nationals and have their privileges respected. An edict of 1511 even went as far as imposing a fine of 50 cruzados on non-compliance.⁴⁷ In the end, the King appointed a civil judge (*corregedor do Cível de Lisboa*) to resolve litigations specifically with the German merchants, but ultimately 'all other privileged people'.⁴⁸

The issue of collective privileges, by way of comparison, hardly presented itself to Italian contracting families, who, as we have seen, readily naturalised and integrated into Portuguese society and thereby severed any allegiance to the idea of a collective trading 'nation' that was to represent their interests 'against' the Portuguese King.⁴⁹ That is not to say they immediately were treated as Portuguese. To be more precise, both the Affaitati (in 1524) and the Giraldi (in 1533) were granted a German's privileges. Privileges, however,

⁴⁵ letter of V. Fernandes' nomination, in Chanc. de D. Manuel, liv. XXXV, fl. LIII, published as an appendix in *Documentos para a Historia da Typographia Portugueza nos seculos XVI e XVII*, ed. Deslandes, pt. II, Lisbon (1882); Joaquim Barradas de CARVALHO, 'Fernandes Valentin', in *Dicionario de História de Portugal*, ed. Serrão, 2, 204.

⁴⁶ Protection by civil militias is dealt with in conjunction with the right to armed retinues and contained in the privilege of August 30, 1509 with respect to all Germans residing in Lisbon; 'Queixas dos feitores allemães em Lisboa, perante El Rei, de que alguns feitores recusão contribuir para as despesas das expedições de seus privilegios', November 1511, in Visconde de SANTARÉM, *Quadro elementar das relações políticas e diplomáticas de Portugal* (1843), I, sec. VIII.

⁴⁷ see the *carta régia* of February 22, 1510 published, alongside the 1511 edict in DENUCÉ, *Privilèges commerciaux*. The originals belong to a sheaf of privileges gathered by the Flemish merchant Edouard Sonnemans to petition the Portuguese King with an eye to being upheld in 1644; the sheaf is kept in the South African Public Library at Cape Town, Grey Collection, no. I/360.

⁴⁸ A.N.T.T., Livre de Leis extravagantes, Casa de Suplicação, Casa Forte: estante 1, prateleira 8, no. 26. There is a copy in the Núcleo Antigo, fls. 99v/100.

⁴⁹ privileges to Italians for this period nevertheless exist, if in limited numbers, but concern themselves exclusively with passing visitors engaged in the grain trade etc. Even in the 1790s an English observer deigned to mark out the Italians from other merchant nations on the basis that they lived 'in a solitary style, very rarely paying visits even to those of their own nation', cited in S. FISHER, 'Lisbon as a Port Town in the Eighteenth Century', in *Lisbon as a Port Town, the British Seaman and other Maritime Themes*, Exeter Maritime Studies no. 7, Exeter (1988), 28. Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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much as I had hoped to exploit their rich material, are ultimately an inadequate source to set about analysing the shifting involvement of the various contracting houses engaged in the European spice trade.

But alongside starkly different types of company structure, tradition played a determining role in the fortunes of the trading communities' dealings with the Crown. And here the tradition of High German collaboration with the Portuguese in overseas enterprise was nothing such as the Italians from the early admiralty under the Pessanha family through explorers like Ca' da Mosto, merchant families like the Bardi and Lomellini, and geographers such as Patrizio di Conti could boast of.⁵⁰ Indeed, Martin Behaim's magnificent globe of 1492, widely understood to have been a vehicle for mustering commercial interest if not concrete financial backing in overseas discovery on the part of Nuremberg's ruling patriciate, fell flat.⁵¹ For when Diogo Fernandes, a Portuguese diplomat presented himself in the following year to the Fuggers on the recommendation of Emperor Maximilian with a view to securing some financial contributions for a prospective voyage to 'China', he received only the pathetic sum of 100 florins from the Fugger and Gossembrot.⁵²

This episode may well have been a cause for personal rancour on the part of the Portuguese Crown, for, as reported by Thorne in Hakluyt, it served to convince the Portuguese Crown to insist resolutely thenceforth on a national monopoly, that the Pope should 'judge at that should be found and discovered to be of his jurisdiction, and command that none other princes should intermeddle therewith'. In any case, Rem reports in his diary how German merchants complained that 'the King made it so that they never happily entered

⁵⁰ for this theme, see Carmen RADULET, 'La filière italienne' in Michel CHANDEIGNE ed. *Lisbonne hors les murs*, Paris (1990) and, more substantially, much of the life's work of Charles VERLINDEN, specifically 'The Italian colony of Lisbon and the development of the Portuguese metropolitan and colonial economy' in *Studi in onore di Armando Saporì*, Milano (1957), and more generally 'From the Mediterranean to the Atlantic. Aspects of an economic shift, 12th-18th centuries', *Journal of European Economic History*, vol. I, no. 3, winter 1972, 625-. A number of micro-historical studies devoted to particular families of Italians active in Portugal has been made by Virgínia RAU, for example, 'Uma família de mercadores italianos em Portugal no século XV: os Lomellini', sep. de *Revista da Faculdade de Letras de Lisboa*, t. XXII, 2nd series, no. 2 (1956) and 'Bartolomeu di Iacopo di Ser Vanni, Mercador-Banqueiro Florentino "estante" em Lisboa nos meados do século XV', in *Mémorias do Centro de Estudos de Marinha*.

⁵¹ Götz Freiherr von PÖLNITZ, *Martin Behaim, in Gemeinsames Erbe, Perspektiven europäischer Geschichte*, München (1959), 129 ff; Hieronymus Münster's trip to Portugal in 1494, which reported with keenness on the activities going on in the Casa da India, and despite the accompanying presence of the merchant capitalist Anton Herwart, went equally unheeded, *Itinerarium sive peregrinatio excellentissimi viri artium ac utriusque medicinae Doctoris Hieronimi Monerarii de Feltkirchen civis Nurembergensis*, nrs. trans. and with commentary by B. de Vasconcelos, in *O Instituto*, Coimbra (1930), 4a série. vol. 9, número 5.

⁵² account in Gamiã de RESENDE, *Chronica de El Rei D. João II*, ed. Biblioteca dos Classicos Portugueses, Lisbon (1902), I, 560 and III, 340. Also FREIRE, *Noticias da Feitoria de Flandres* (1902), 342 and 365.

trading relations with him' (*er machet, dsz sy nimer gern mit ihm handlen wolten*).⁵³ Indeed, parallel sources would suggest he was actively trying not to. For at the same time as the German trading community was using their hold on precious metal supplies to push for trading concessions on the route to the Indies, the King had found a team of south German miners to prospect and work on existing mines in Portugal, and even engaged a couple of skilled imperial foundry workers to build a foundry in Guinea close to some of the Empire's biggest metal markets, with the explicit hope 'that they will make that Fugger and others hang their head' (*que elles ham de fazer com que este Focoro e outros abaixem a cabeça*).⁵⁴

With this resentment on the part of the Portuguese Crown, Germans consequently were not in a position to create the openings made by Lisbon Italians so as to participate in the Indies spice trade during the years of official monopoly. But it was not simply their novelty, their manner, which Tomé Lopes described as 'that coldness (*frieldade*) for which they were known by the King', and what Germans counterperceived as Portuguese 'avarice', as Strieder would have it, which precluded them entry.⁵⁵ Germans seem both unable and unwilling to collaborate more generally. We can see this in their demands for exclusivity on re-export contracts; further, they didn't team up to launch any kind of joint ventures which Italians like Lucas Giraldi managed so consummately, whether it be with Diogo de Castro, or, in a precocious scheme on the Brazilian trade, with Jorge de Figueiredo.⁵⁶

Perhaps the pivotal moment in the German firm's relationship with the Portuguese economy came with their weighty participation in the Almeida fleet of 1505, both the first and the last time during the period under study that the High Germans enjoyed an active role in the Carreira das Indias. Ever since the signing of a new set of privileges in Lisbon in February 1503, the High Germans had lobbied, with the personal intercession of Emperor Maximilian and Archduke Philip the Fair, for a part in the Indies fleets and the despatch of certain representatives. Initially, this had been refused, the King declaring that he intended to reserve trade for himself in the foreseeable future.⁵⁷ Only in August 1504 did he relent,

⁵³ Lucas REM, *Tagebuch des Lucas Rem aus den Jahren 1494-1541*, ed. Greiff, (1861), 105.

⁵⁴ J. DENUCÉ, *L'Afrique au XVI^e siècle et le commerce Anversois*, Antwerp (1937).

⁵⁵ Tomé Lopes, letter of 16 February 1513, C.C. pte. 1, m. 12. doc. 77.

⁵⁶ see, for example, Gaveta #1620, X, 1-12, in A. da Silva REGO, *As Gavetas do Torre do Tombo*, Centro de Estudos Históricos Ultramarinos, Lisboa (1960), 582.

⁵⁷ the letters were obtained through Konrad Peutinger, the famous Augsburg humanist and son-in-law of Anton Welser, see Erich KOENIG ed., *Konrad Peutinger's Briefwechsel*, Munich (1923), pp. 56-58. The Portuguese King's refusal is described by K. HAEBLER, *Die überseeischen Unternehmungen der Welser*, Leipzig (1903), pp. 14-18. Halikowski Smith, Stejan (2001), Portugal and the European spice trade, 1480-1580

at which point Lucas Rem, primarily an agent for the Welsers, forced him into a contract securing the right for three privately owned vessels under the command of Baltasar Sprenger to be sent forthwith.⁵⁸

The voyage was clearly fraught with tensions from the beginning. Rather than being simply left to trade, for which reason they had been sent out, the German delegation was pressganged into tedious tasks for the colonial administration, supervising the construction of forts in Sofala and Guardafui, opposite the straits of Aden, and then forced to take part in naval skirmishes against the King of Calicut. And then, on their return to Lisbon in November 1506, some retroactive law was put into effect that deprived them of the pepper and fine spices in their cargoes, which had unconditionally to be re-sold to the King's officials at a set price. The German merchants were not even compensated by the return of their precious metals that they had dutifully presented at the Mint prior to departure. Instead, an indemnity for the confiscated spices in the form of 12.000 arrobas of Madeiran sugar, equivalent to 10.450 cruzados or 475 quintals of pepper, was offered them. Even this was not immediately forthcoming; in 1510, it appears that the King still owed them 6.693 arrobas. The German trading community was understandably incensed by this course of events and immediately sought redress in civil proceedings.⁵⁹

Although the outcome is unknown, the Portuguese monarch's breach of good faith clearly scarred further interest the German firms might have harboured for imperial enterprise under Portuguese command. This can only have been compounded by the loss of two chartered ships fitted out and belonging to the Fuggers in the subsequent fleet to the Indies

⁵⁸ HÄBLER, *Die überseeischen Unternehmungen der Welser*, 16 and Hubert Freiherr von WELSER, 'Lukas Rem', in *Schwaben Lebensbilder*, VI, Munich (1958), 166-85. Ca'MASSER reports that the Germans only had two ships in the Almeida fleet, and that they returned to Lisbon on 22 March and 3 June, rather than in November, account published in *Archivio Storico Italiano*, 23. Hermann KELLENBENZ claims that Peter Holzschuher died accompanying a voyage to Calicut as early as 1504, in other words prior to the Almeida fleet, but fails to indicate any source. 'La Participation des Capitaux de l'Allemagne Méridionale aux Entreprises Portugaises d'Outre-Mer au Tournant du XVe siècle', 313.

⁵⁹ The voyage is covered by a somewhat jingoistic monograph, F. HÜMMERICH, *Die erste deutsche Handelsfahrt nach Indien*, Munich (1922), 135-139 and otherwise by the personal diary of Baltasar Springer, who travelled on the *Leonarda*, published in Augsburg in 1509 under the title *Die Merfart vn erfahrung nuwer Schiffung und Wege zu viln onerkanten Inseln und Kunigreichen.. wie ich Balthassar Spreger sollich selbs: in kurtz verschyne zeiten: geschen vn erfahren habe, gedruckt anno 1509*. Text reproduced in Franz SCHULZE, *Balthasar Springers Indienfahrt, 1505-06*, Strassburg (1902). A further letter on the voyage was sent by Valentim Fernandes to Conrad Peutinger on August 16, 1505 and is included in KOENIG, *Konrad Peutinger's Briefwechsel*, 56-58 and published separately in the *Abhandlungen der Hist. Classe der K. Bayerisch Akademie*, Munich (1860). The diary of Hans Mayr, factor on the *São Rafael*, and apparently sent on to Peutinger, has been lost.

The documentation regarding the lengthy execution of the sugar indemnity payable to the German trading community is presented by Fernanda Jasmins PEREIRA, *Documentos sobre a Madeira no século XVI* (Halkowski Smith, Stefan (2001), Portugal, and the European spice trade, 1480-1580) existent in the *Arquivo Histórico Ultramarino*. Analise documental, published by A.N.T.I., Série Fontes Semi-Tratadas. DOI: 10.28708/2585

under Tristão da Cunha and Affonso de Albuquerque, and which had left Lisbon before the row with the return of the Almeida fleet had blown up.⁶⁰ From then on, until the 1570s and the passage of a good generation, the High German trading companies invested their efforts in schemes that bypassed the Portuguese.⁶¹ From 1509, the Welsers acquired land in Palma in the Canaries with an eye for a sugar-cane plantation.⁶² Then, following the decision of the Spanish Crown to allow Germans to trade with the Indies, between 1526-35 at least ninety trading ships sailed from Seville to the New World with capital put up by the Welser. Many of these, such as Garcia de Loaysa's expedition aiming to set up in the Moluccas, incurred huge losses and the Treaty of Saragossa in 1529 effectively dispelled any further hope of engaging in the spice trade through the Spanish Crown.⁶³ Opportunity-seeking in the spice trade was not, however, killed. In 1559, the Fuggers despatched a factor to Alexandria with the charge to organise a trading link with either Fiume or Ragusa, and between 1570-74, the Manlich and Krafter firms tried to establish direct links with the Levant from Marseilles under the French flag.⁶⁴ But when the Fuggers were newly courted by the Portuguese with the offer of generous concessions on co-participation in the spice trade, the answer was no, the firm declaring that 'it didn't want to increase its responsibilities on the peninsula in this way'.⁶⁵ Whatever the lingering memories of the Almeida fleet, the Fuggers were still burdened by outstanding claims in Lisbon, estimated to the sum of 300.000 florins

⁶⁰ M. NUNES DIAS, 'Os metais alemães', *Actas do Congresso Internacional- Bartolomeu Dias e a sua época*, vol III, Porto, (1989), 212, citing Sophus RUGE, *História da época dos descobrimentos*, Lisbon s.d.. Note that MARQUES DE ALMEIDA indicates that the Welser invested rather than the Fugger, and that they were represented by Rui Mendes and Lucas Rem, *O Eixo Lisboa-Antuérpia*, (1989), 101.

⁶¹ of the few examples in this period of High Germans active in the Portuguese imperial trade one might cite Jörg Pock, a representative of the Imhoff who went to India in 1520 and is reported to have died in Bisnaga in 1529, see Kellenbenz, *Fremde Kaufleute*. ., 320, from correspondance with the young Martin Behaim contained in the Behaimsarchiv, Nürnberg. Also G. Hervoot (Georg/Jorge Hervart), active in the diamond trade before 1531.

⁶² *Tagebuch des Lucas Rem aus den Jahren 1494-1541*, ed. B. Greiff, 13.

⁶³ for High German participation in Spanish imperial trade, the aged work by K. HÄBLER, *Die Geschichte der Fuggerschen Handlung in Spanien*, Weimar (1897) still holds up well; also M.A. Hedwig FITZLER, 'Der Anteil der Deutschen an der Kolonialpolitik Philipps II von Spanien in Asien', *Vierteljahrschrift für Sozial- und Wirtschaftsgechichte*, Bd. 28, (1935), 243-281 and Enrique OTTE, 'Jacob und Hans Cromberger und Lazarus Nürnberger. Die Begründung des deutschen Amerikahandels', in *Mitteilungen des Vereins für der Geschichte der Stadt Nürnberg*, (1963/4).

⁶⁴ Lourenço Pires de Távora, in *Corpo diplomático português*. ., ed. L. A. Rebello da Silva (Lisbon, 1862-1910), IX, 111-12; F. ROTH, 'Zum bankrott der Firma Manlich in Augsburg', *Zeitschrift des historischen Vereins für Schwaben und Neuburg*, Bd. 34, Augsburg 1908, 160 ff. More generally, see Henri BRUNSCHWIG, *L'Expansion Allemande Outre-Mer du XVe siècle à nos jours*, Paris (1957), esp. 3-28.

⁶⁵ 'não quis por este modo aumentar as suas responsabilidades na península' reported by J. L. de AZEVEDO, Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580 *Época de Portugal económico: esboços de história*, (1929), 96.

in 1546, if cut down to around 40.000 ducats ten years later.⁶⁶ Furthermore, as their commercial letters testify, they had realised that there were much greater profits to be drawn from the so-called imperial 'country trades' than from shipping on the risky and slow Cape route.⁶⁷

What more can be drawn from this sorry story? Certainly the lack of trust between the two parties: in Valentim Fernandes' nomination letter, he was obliged to provide a copy of all correspondance or a report of all dealings made by the German trading community even amongst themselves.⁶⁸ Reciprocally, the Germans had no reason to believe in the King's word, for even after participation in the Indies fleet of Dom Francisco de Almeida had been firmly agreed upon in August 1504, Peutingger continued to harry the Emperor's secretary, Blasio Hölzl, for the full weight of Maximilian's backing.⁶⁹ And we have seen how privileges, to be kept on one's person at all times, were in themselves a mark of lack of trust and wider acceptance in the Portuguese community.

One might ask how much the mutual trust between Portuguese Crown and the Italian trading community, which was essential for certain transactions such as extended loans to the Crown, might have in fact misplaced. Certainly, the fact that João Francisco Affaitati reported back to the Portuguese arch-rivals, the Venetians, bequeathing many of the letters recorded in Sanudo and Priuli's diaries apparently went unobserved, since Ca' Masser was sent to prison for such actions.⁷⁰

At any rate, the story of the Almeida fleet revealed that German business was not malleable enough to accomodate cooperation in military sorties of the kind that won Italians repeated concessions and even official overseas charges from the Portuguese authorities. The tone, for example, of Piero Strozzi's letter reporting on the progress of the Vasconcelos fleet suggests quite how different relations were between the state fleet and private Italian merchant

⁶⁶ Fugger balance sheet of 1546 in EHRENBERG, *Capital and Finance*. ., 111; the *Testament* of 1557 is covered by HÄBLER, *Die Geschichte der Fuggerschen Handlung*. ., 104.

⁶⁷ *The Fugger News Letters, 1568-1605*, trans. Pauline de Chary, First series: The Week-End Library, (1928), I, 46.

⁶⁸ 'faça publico aquellas sprituras contrautos e quaesquer outras cousas que hos ditos mercadores alemães antre sy huuns com os outros fezerem. . que em sua lymgoagem tyuerem e quyserem tirar em latym ou em limgoagem portugues', A.N.T.T. Chanceleria de D. Manuel, liv. XXXV, fl. LIII, dated 22 Feb. 1503.

⁶⁹ the letter is published in T. HERBERGER, *Conrad Peutingger in seinem Verhältnisse zum Kaiser Maximilian I*, *Jahresbericht des historischen Vereins für Schwaben und Neuburg*, (1851), 36.

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⁷⁰ *SAVEDO Online Database*, 116

capitalists, who were prepared to stand by and serve God and the Portuguese King.⁷¹ Even when Dinis Cerniche (Sernigi) openly provoked an already hostile Governor General Albuquerque by refusing to request a license to sail for Malacca on the grounds that the King had already granted him sufficient jurisdiction, an action which officially condemned him to be put to death by decapitation, the issue was peacefully resolved in the Italians' favour.⁷² In subsequent instances, foreign parties, as was the case with Giovanni da Empoli on his second trip to the Indies, still won official exemptions from administrative interference. Equally, despite further quarrels which later erupted on the same fleet, this time as a result of four Italian sponsored ships' refusing to take part in military confrontations, the conflict was satisfactorily smoothed over, for the same Italian firms were not barred from later trips.⁷³

The issue of malleability also comes up with respect to company policy on matters such as sales on credit, which in the German case was expressly forbidden, minimising the available terms on which the two sides could do realistic business. It may have been as much a product of the structure of the trading company as of national character, or tradition. If not fully autonomous, the Italian *filiale* in Lisbon was accountable to itself in much higher degree than its German counterpart, which meant that it was able to make much stronger, more confident decisions. The pyramidal hierarchy of the German firm meant that the type of merchant sent out to Lisbon was frequently a minor, a mere apprentice to the trade.

But whatever the reasons, neither in the East nor at the Portuguese court could German merchants come to lasting commercial agreements. There resulted a number of broken and failed deals that envisaged exchange of spices, prospective commercial embassies that came to nothing. Trade was subsequently ever more 'passive', initially limited to Lisbon, but retreating ever more to Antwerp. But, by and large, this was a period in which the German firm had largely moved on from the trade in goods to the trade in money. Only with Konrad Rott in the 1570s did German commercial interests reconverge on the European spice trade.

⁷¹ 'per havere trovato di qua i portogalesi in gran guerra con questi mori: ci è stato forcia fermarci que et non seguire il nostro viaggio: Che così è piaciuto allo cotenente dil Re di Portogallo et a nostri è parso obedirlo et servirli con la nostra armata per esser quella al servitio et di dio et dil Re.E.', Lettera di Piero di Strozi scripta in Quiloa. . a messer Andrea Strozi suo padre in Firenze a di XX dicembre 1510, Codice Stroziani, Biblioteca Magliabecchiana.

⁷² Albuquerque had instructed the King that 'If your Highness wishes to be rich, do not let the merchants bring ships here to trade in India; we have enough ships here already', *Cartas de Albuquerque*, I, 24-5. See the account of the quarrel in *Relação das Nãos e Armadas da India, com os successos dellas. . .*, ms. 20.902, chapter XI, vol. 3, British Museum.

7.4. Buyers and the Crown. Dependency, or a case of ‘private lucre, public loss’?

Who gained most from the spice trade? Contemporary scrutiny often broached this subject in a bid to determine who was most responsible for the steep climb in prices, deemed a transgression of the moral economy, on the European market. In a long-standing exchange of heated published tracts, Paulo Giovio and Sebastian Münster attacked the official Portuguese policy of *mare clausum*, asserting that the Crown’s monopoly was responsible for excessive prices.⁷⁴ One might also cite the scarcely veiled critique in the dedication to Erasmus’ work *Chrysostomi Lucubrations*. At one point Pope Clement VII even begged Dom João III to do his bit to reduce European market prices arguing that his fame and glory would be otherwise compromised.⁷⁵ Damião de Góis insisted that the blame should lie rather with the monopolistic behaviour of the private contractors (*Fürkäufer*), who squeezed smaller buyers (*Unterkäufer*) further down the trade chain.⁷⁶ Other commentators, such as the *Sittenprediger* or Reichstag legislators of 1512, were inclined to back Góis on the issue of who was getting rich from the spice trade. Erasmus on another occasion denounced ‘le monopole de quelques uns’ on the Portuguese imperial trades and had appealed to ‘l’autorité des princes’ to curb ‘la cupidité des trafiquants’.⁷⁷ But perhaps the most explicit account, and in frank distinction to his compatriots who targetted the Portuguese both to justify and so as to further their own campaign for a *mare liberum*, is that of John Wheeler, Secretary of the Society of Merchant Adventurers, who was even more specific as to whose pockets the profits of the Portuguese spice trade were flowing into:

First for the *Portingal*, we know that like a good simple man he sailed every year full hungerly (God wot)

⁷⁴ see ‘Breve contestação de Damião de Góis a Paulo Jóvio sôbre o dominio dos portugueses’ in D. de GÓIS, *Opúsculos Históricos*, Porto (1945).

⁷⁵ ‘Nisi Honoris’, 9 April 1524, A.N.T.T., Bullas, maço 20, no. 8, and published in *Corpo diplomático portuguez, conteudo os actos e relações políticas e diplomaticas de Portugal com as diversas pôtencias do mundo*, ed. L.A. Rebello da Silva et al., Lisbon (1862-1910), t. II, 210.

⁷⁶ Góis’s argument is summarised in Sebastian MÜNSTER’s letter ‘De rebus et imperio Lusitanorium ad Paulum Jovium disceptatiuncula’, where he states: ‘Damianus. . . beschuldiget die Fürkäufer, die alle Gewürze an sich kaufen und ander Unterkäufer dermassen strecken, dass sie die der Gemeine Mann durch das ganze Europa muss entgelten. Diese schädlichen Fürkäufer sollte man zum Land heraustreiben und im ganzen Europa nicht tolen’, in *Briefe Sebastian Münsters. Lateinisch und Deutsch*, ed. and trans. Heinz Burmeister, Frankfurt am Main, (1964), 171. Münster attacks Góis in his Dedication to the Latin edition of his famous *Cosmographiae universalis*, Basel (1558), addressed to Charles V; Jovio (Paulus IOVIUS) censures the Portuguese in his ‘De Moschovitarum legatione’, in *Novus Orbis Regionum ac Insularum Veteribus Incognitarum, una cum tabula cosmographica, [et] aliquot alijs consimilis argumenti libellis*. . Simon Grynaeus (1532).

⁷⁷ in Marcel BATAILLON, ‘Erasmus et la Cour de Portugal’, *separata do Arquivo de história e bibliog.*, vol. II, Coimbra (1927), 21. Halikowski-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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about three parts of the Earth almost for spices. and when he had brought them home. the great rich purses of the *Antwerpians*, subjects of the King of Spain, engrossed them all into their own hands.. whereby they only gained and all other Nations lost. For that the spices, being in few men's hands, were sold at such a rate as they listed, to their own private lucre and gain. and to the hurt and damage of all others.⁷⁸

In Graphs 1.1 - 1.4., I have tried to plot the accumulation of value of pepper as it moved along the commercial axis from producer to consumer. But rather than presenting the findings as a simple price ladder, I have chosen to index the market values of pepper to various places whose distance I have measured from the point of production, taken to be Vadakkenkur, to which the Portuguese referred as 'O Reyno da Pimenta'. The distance travelled, plotted along the X-axis, serves as a rudimentary cost function. I have repeated the exercise for three given sets of information, relating not just to the Portuguese Atlantic, but also Venetian Levantine pepper, and for different dates (c.1512, and c. 1585). The results would seem to suggest that the profits from the trade of Portuguese spices, once things had settled down after the first few years of super-profits,

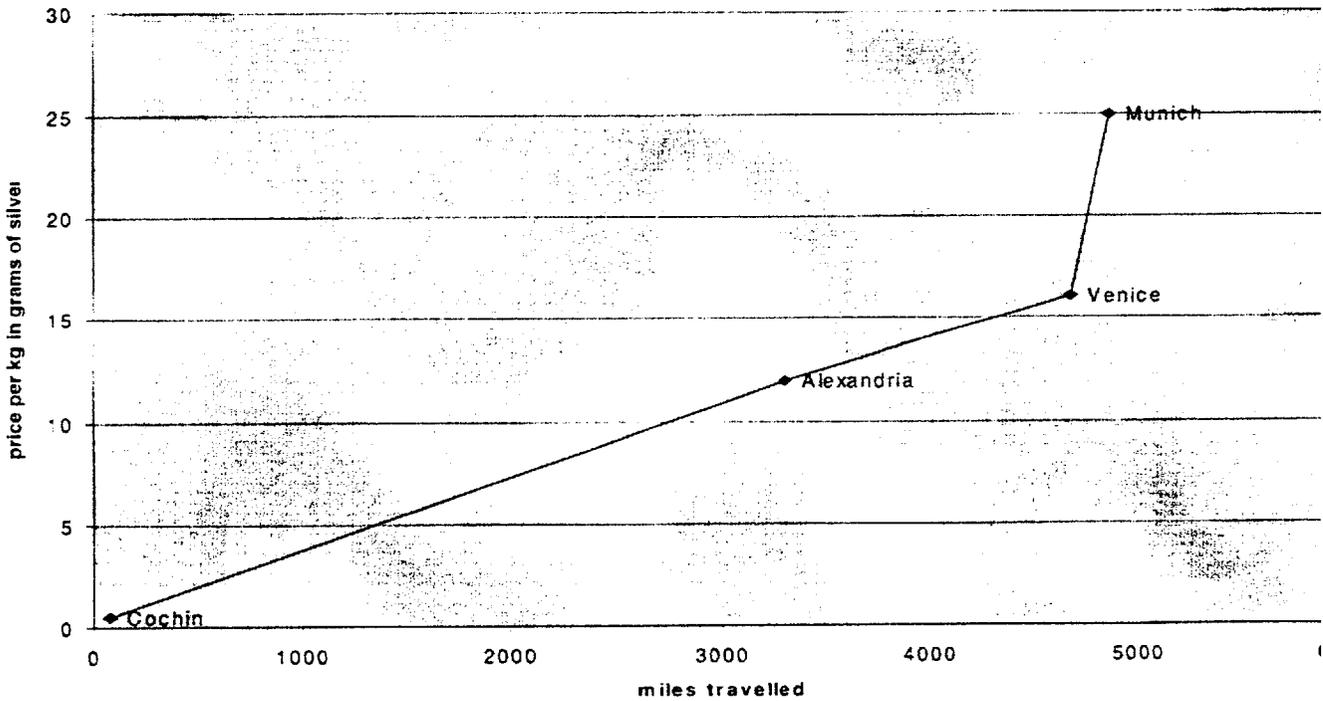
- a. did not benefit the Portuguese Crown monopoly holders so much as it did the private sub-contractors;
- b. that the sharing of profits was more equable on the Levantine trade route;
- c. that the trend might have exaggerated rather than equalised over the course of the sixteenth century;
- d. that the rate of profits was higher between Antwerp and Augsburg than it was between Lisbon and Antwerp.

How can we explain these findings? A neo-classical economist would immediately suggest that as one moves from the productive through the commercial life-stage of a commodity, the leaps in the price per unit only grow. This is because, the traders, and particularly the retailers, who are the last stage before the consumers, buy the highest degree of risk. In our case, the risk purchase paid off because, as we shall see in Chapter 10, the market for spices over the sixteenth century was greatly inelastic: people kept on buying spices with little regard for the price attached.

But this explanation is not sufficient. Why were sub-contractors striving so hard for rights on the Indies trade if the lion's share of profits was to be made in Europe? Why did the Portuguese Crown, which held the trade so firmly in its hands, turn the most profitable sections so quietly over to foreigners and that suspect group in its midst, the New Christians?

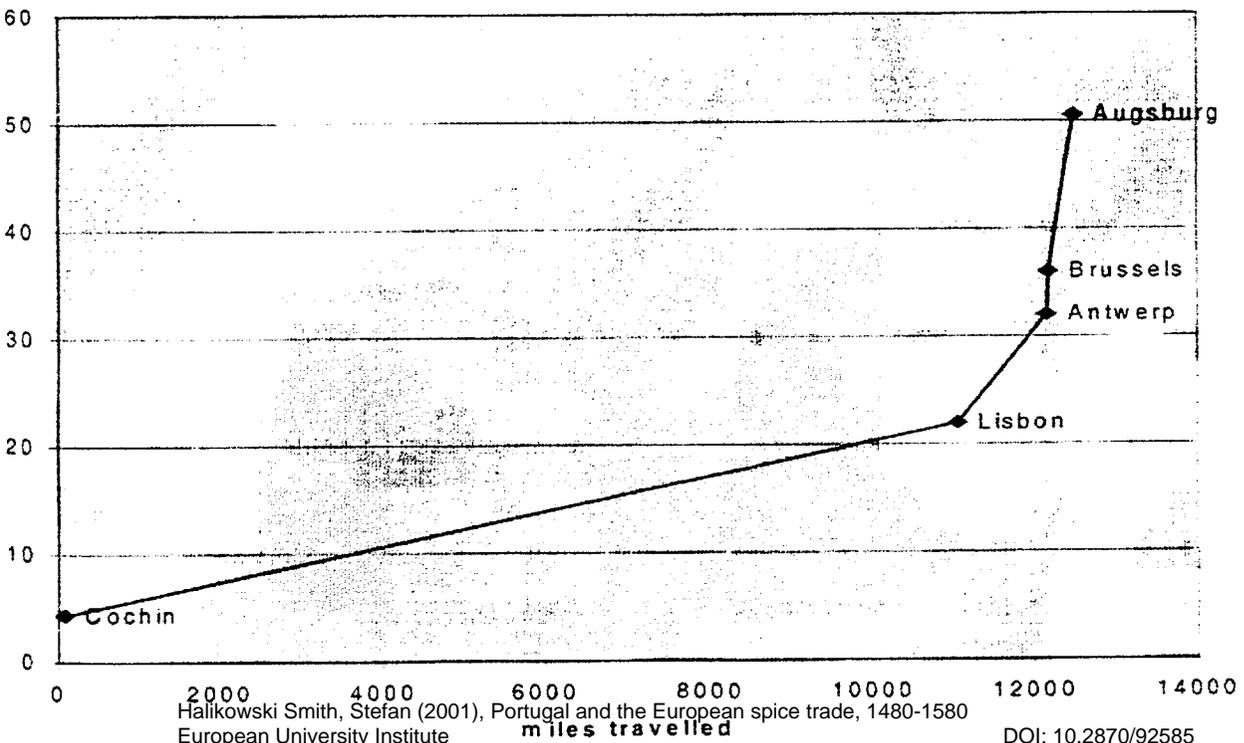
Graph 1. The accumulation of value along pepper's commercial axis.

Graph 1.1. The Venetian redistributive system.



Source: M.N. PEARSON, 'The Portuguese in India'.

Graph 1.2. Portuguese redistribution, 1517-19.

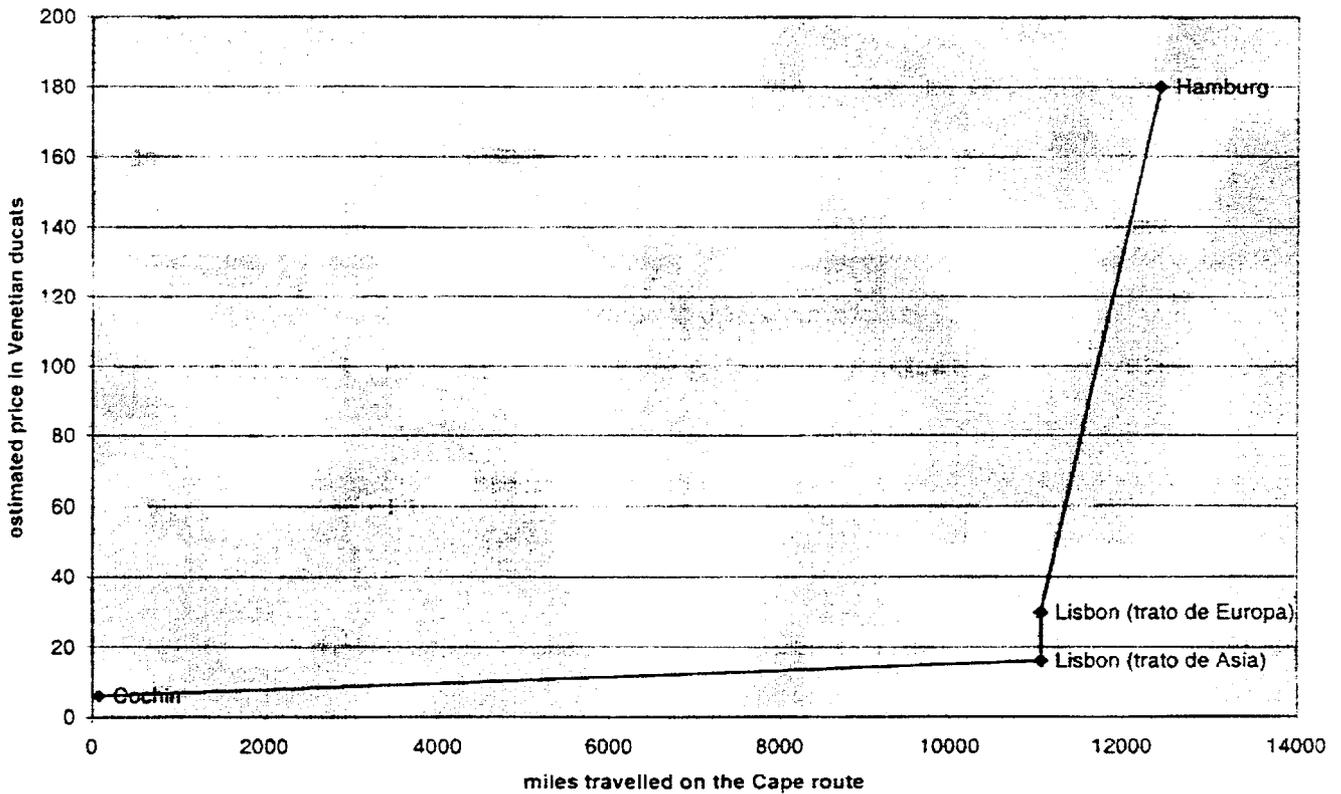


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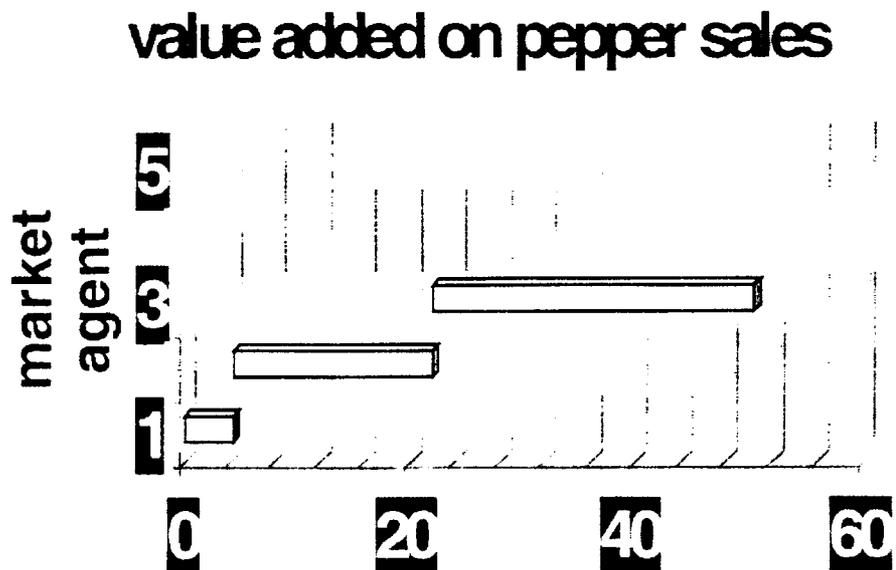
C.C. I. 25: C.C. III. 6. doc 51; FREIRE (1920), LXXXVI V.M.

Graph 1.3. Portuguese redistribution, 1585.



F. DOBEL. *Über einen Pfefferhandel der Welser und Fugger.*, (1886).

Graph 1.4. Accumulation of value on the pepper trade according to nationality.



where (1) are Indians (3) are Portuguese and (5) are Germans.

The sources are the same as for Graph 1.2.

For the Crown, as operator of the Carreira da India, was no stranger to risk.

Turning to Wheeler's account, one finds the redistributive contractors in Antwerp with their 'great rich purses', despite the evident fact that it was the Portuguese who 'led' the exchange, that are indicted for having made a 'plain monopoly; whereby they only gained and all other Nations lost'. 'Great rich purses', then, or access to capital, swung the balance in the sub-contractors' favour. Certainly, the fiscal shortcomings of the Portuguese Crown are easily demonstrable and can be related to the spice trade from its very beginnings. Vincenzo Quirini estimated that the King would only ever be able to supply one quarter of the total capital needed to send a fleet of eight to nine ships to India per annum.⁷⁹

But capital is not enough to tell the full story. Even when there was capital in abundance, as was the case with Spain in the second half of the seventeenth century, a contemporary reading questioned the inapparent monetary benefits of the Antwerp-bound *flotas de prato* to the seventeenth century Spanish state. It was written that:

Spain is like the mouth that receives the food and chews it only to send it immediately to the other organs without retaining more than a passing taste or a few crumbs that accidentally stick to its teeth. It is not having much money that sustains the states.⁸⁰

Garcia de Resende observed much the same phenomenon in Portugal: 'The gold of the Indies didn't come to Portugal; it came to Portugal to roll on, in a continuous movement, to Flanders' (*O ouro das Índias não vinha para Portugal; vinha a Portugal para rolar, acto contínuo, para Flandres*).⁸¹ Here, in short, we have a critique on the prevailing economics of bullionism.⁸² But the critique, more importantly, might equally hold for Portuguese spices. For here too, commentators like Damião de Góis were realising that possessing the spice trade was not enough - the idea of Portugal he put forward in the 'Crónica de Dom Manuel' as 'a receptacle for riches' (*um receptaculo de riquezas*) was deficient - that there was something

⁷⁹ QUIRINI, in *Le Relazioni degli ambasciatori veneti*, 16. The annual income of Portugal amounted to around 350.000 ducats per annum, of which 300.000 were spent on the standard expense of the Kingdom. The costs of fitting out an average of twelve ships a year and the salary of crew and officers came to 120.000 ducats. Another 100.000 ducats was needed for the purchase and loading of the spice fleets. This means that the King was in a position to provide only 50.000 out of a total sum of 220.000 ducats required.

⁸⁰ cited in Pierre VILAR, *Ora y moneda en la historia (1450-1920)*, Barcelona: Ariel (1969), 186-93, which is in turn cited by André Gunder FRANK, *World Accumulation, 1492-1789*, (1978).

⁸¹ Garcia de RESENDE, *Miscellanea* (1629), dialogue 4, as cited in M.C. CEREJEIRA, 'O Renascimento em Portugal', in *Clenardo e a Sociedade Portuguesa*, Coimbra (1974), vol. 1, 209-10.

⁸² on this subject, one might like to consult Pierre VILAR, 'Les primitifs espagnols de la pensée économique quantitative et le "bullionisme"', *Bulletin hispanique*, LXIV bis (1962). DOI: 10.2870/92585

in the nature of the exchange which made that 'from where all of Europe proceeds to enrich herself from the goods of Your Highness and these kingdoms and Your Highness to get poorer' (*dahy procede emriquecer toda Europa dos bens de Vossa Alteza e esses reynos e Vosa Alteza empobrecerem*).⁸³

One of the lines of investigation that offered itself, consequently, and one benefiting, it seemed, from a broader, systemic approach was that of the neo-Marxist theory of dependence which, if a little dated, proceeds from the rejection of the precepts of western economic orthodoxy, being mutual and balanced gains from trade, playing on the purported inequalities within the capitalist system manifested at a geo-historical level as core and peripheral regions to explain variations in levels of development, particularly chronic cases of underdevelopment. Theotonio dos Santos has defined dependency pre-eminently in terms of unequal terms of trade, that is, that some countries 'can only expand as a reflection of the expansion of the dominant countries'.⁸⁴ Most relevant to historians, perhaps, is the way that dependence theory has been historicised and elaborated by Immanuel Wallerstein into the controversial idea of a world system, a system comprised of a generalised form of geographically contingent dominant relationships tied to a dynamic sequence of historical developments.

Criticised, generally for its absolute and simplifactory conclusions, and specifically for the model's lack of inner dynamic quality and the contentious choice of the sixteenth century in Europe as the world system's purported point of origin, Portugal as it moved into its imperial period would nevertheless seem to conform to a number of attributes of a classic semi-periphery. It created its own maritime empire based upon the extraction and consequent export of a number of overseas resources, but the value added was manufacturing or further re-export once these goods had passed on to countries of the European core.

The spice trade is a case in point. Further, if we pause a moment to consider what the Portuguese were obliged to trade, it was not of the order of the petty domestic presents (*serviços*) - some cloth, coats, hats, basins, some coral, sugar and honey - that Vasco da Gama had prospectively brought with him to Malabar on the occasion of the first Portuguese voyage to the Indies. These came close to offering affront. Instead, the Indian traders demanded

⁸³ D. de GOÍS, letter of July 2, 1544. Published as doc. IX(a) in *Ineditos Goesianos*, ed. Guilherme J.C. Henriques, vol. I, Lisbon (1896), 93-94.

⁸⁴ in G.M. MEIER, *Leading Issues in Economic Development*, 4 ed, Oxford (1984), II.C.2. 'Dependency Theories of Underdevelopment' (2001), 139-143, and the European spice trade, 1480-1580
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precious metals, silver ingots and copper.⁸⁵ Metals that the Portuguese would be forced to buy on the European market, initially from those German merchant capitalists who held majority shares in the mining and metal-smelting industries, as well as their later sale and redistribution.

Godinho has imaginatively described the influence that busy central European mining region exerted upon Charles V's Empire as 'le coeur de tous ses battements'.⁸⁶ Can we not extend this metaphor, with the proof of all this German metal circulating on imperial trading networks, to suggest that its beating reverberated right through the Portuguese empire, to the very tips of India? And we would do well to remember the heart's two-way capillary action, for if metals flowed in one direction, spices flowed in the other.

High Germans, then, at the logical beginning of the entire trade cycle - producing the goods the Portuguese needed to trade to finance their expansion - but also at the end of this famous trade cycle, for it was above all the German markets which the Portuguese depended upon for sales of these same spices, as we have seen in Chapter 5. I would argue that this situation amounted to dependence as a state of affairs if not a system - the basic, self-evident fact that neither the inputs nor the outputs of this particular trade cycle were determined within the Portuguese economic sphere, that the control by consequence lay elsewhere.⁸⁷

This is a point much laboured by the economic historian António Sérgio, who has chastised his compatriots for the ingenuity of their *política do transporte*, insinuating that they were little more than *simples intermediários*, a position echoing Wheeler's 'good, simple man', instead of prioritising manufacturing or, following the seventeenth century statesman and political philosopher Duarte Ribeiro de Macedo, 'a introdução das artes', which might have at least have provided the nation with a fixed, productive, metropolitan base (*uma base bem assente de fixação metropolitana de produção em Portugal*).⁸⁸ But ultimately Sérgio's

⁸⁵ see, for example, the list of receipts of the King's factor at Cochin between 22 October 1510 - 22 February 1516 and 1 January 1513 - 28 February 1518 for the purpose of purchase of pepper and other spices. Carta de quitação no. 657, *Arch. hist. port.* or GODINHO, *L'économie de l'Empire Portugais.*, (1969), 321. Reproduced as Appendix 4.

⁸⁶ taken from V.M. GODINHO, 'Le Tournant mondial de 1517-24 et l'Empire Portugais', in *Studia*, no. 1, Lisbon (1958), pp. 184 ff.

⁸⁷ cf. the Venetian case, where Venetian capital was instrumental in the exploitation of precious metal deposits in Eastern Europe, the gold mines at Zlatna for example. See Zsuzsa TSEKE, 'Rapporti commerciali tra Ungheria e Venezia nel secolo XV', in T. KLANICZAY ed., *Rapporti veneto-ungheresi all'epoca del Rinascimento*, Budapest (1975).

⁸⁸ António SÉRGIO, 'Ainda a política do Transporte e a política da Fixação', in *Ensaios. Obras Completas*, Lisbon (1972), tomo III, 188-93; *ibid.* *Bosquejo da História de Portugal*, 2 ed. Lisbon (1923), 32 and the introduction to his *Antologia dos Economistas Portugueses (Século XVII)*, Lisboa (1974). MACEDO's tract *Discurso sobre a Introdução das Artes* was first published together with his other writings in 1743 and 1767, Halikowski Smith, Stefan (2001). Portugal and the European spice trade, 1480-1580. European University Institute. DOI: 10.2870/92585

stance is too ideological, too embittered, and would in any case tailor better to a later age. Trade was still very much the road to wealth in the sixteenth century, in Mun's words 'the verie Touchstone of a kingdomes prosperitie' and spices still very much a lucrative commodity.⁸⁹ There was nothing inherently wrong with being sandwiched in as an intermediary: Daniel Defoe suggested that the rise of the Low Countries was positively due to their being 'the carryers of the World, the middle Persons in Trade', and there are an abundance of theories, as we shall see in a moment with that of Mancur Olson, to suggest that the status of intermediary was if anything beneficial.⁹⁰

Another dimension to the dependence debate sees Empire as the product of a monarchy driven by a sense of mission, a heroic project that drew more upon collective will than the 'functional readiness' of a satiated domestic economy spilling over into the wider world. Indeed, Godinho's early work very much set the wants of an impoverished Portugal as the principal dynamic in Portugal's outward thrust.⁹¹ We are a long way from the words that Camões puts into da Gama's mouth on his first meeting with the Zamorin, da Gama's official announcement that he represented 'a great King who possesses everything in his kingdom in great abundance' (*um grande Rei que tudo tem no seu reino em grande cópia*).⁹² In any case, whatever the lures, the running of the imperial project exposed huge gaps in its structures, whether technical, economic or simply demographic, and that by necessity attracted foreign inputs. In this sense the 'decadence debate' doesn't really have any value, because the underlying structures were never particularly strong. This is the direction of Henry Kamen's thinking: Iberia in the sixteenth and seventeenth centuries is more accurately portrayed as being in a state of dependency than undergoing decline (for the myth of decline, see the preamble to Chapter 11).⁹³

We could present as part of this argument the 'perpetual' grain crisis, and for all the national rhetoric of Portugal as a nation with a maritime vocation (*o povo marítimo*), the shortage of shipping materials, as Ingrid Dürrer's work has drawn our attention to, armaments and personnel expert in using them (*bombardeiros*), even the dearth of trained and willing

and is included in Sérgio's *Antologia* ., 165-231.

⁸⁹ Thomas MUN, *A Discourse of Trade*, London (1621), I.

⁹⁰ Daniel DEFOE, *A Plan of the English Commerce*, London (1728), 192.

⁹¹ V.M. GODINHO, 'Création du dynamisme économique du monde Atlantique, 1420-1670', in *Annales*, no. 1, (1950), and *idem*. *A economia dos descobrimentos henriquinos*, Lisbon (1962).

⁹² Luís de CAMÕES, *Os Lusíadas*, VII, est. 62.

⁹³ Henry KAMEN, 'The Decline of Spain: A Historical Myth?', *Past and Present*, 81, (1978), 24-50.
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crews, of whose ignorance the chronicler Castanheda complained of. Metal workers and prospectors were lacking and, above all, there was a serious shortfall in capital liquidity.⁹⁴ Whatever efforts the Portuguese Crown made to redress the situation, whether protectively through steps to ban German passage to the Indies, or expansively by, for example, thinking of building a foundry in Guinea itself, close to some of the Empire's biggest metal markets, came really to nothing and many features of the dependence we observe in the sixteenth century continued to stand very much unaltered. Thus, three hundred years after the first *ementas* requested of the Feitoria de Flandres, we continue to find naval outfitting materials - timber, sailcloths, iron and hemp - imported from the Baltic areas, while the English merchants in Lisbon thought Portugal's production of wheat, barley and flour 'scarcely sufficient for the Maintenance of its Inhabitants for six months; they are therefore obliged to be supplied from abroad with large quantities'.⁹⁵ Gold had been discovered in Brasil, but behind the imperial enterprise still stood a mighty capital investment, this time from the English rather than the Germans or Italians.⁹⁶

I would avoid going so far as to suggest that dependency created its own mentality, one of resignation to underperformance. But one of the most interesting phenomena to observe is how quietly Portugal's monopoly rights over the potential resources of Empire were resigned to outsiders, whether from the perspective of the Portuguese royal administration or that of the Portuguese populace. With regards to the former, there seems to have been a genuine discrepancy in the definition of the *res publica*. The revocation of Cape Verdean trading rights to a stretch of the West African coast opposite their islands, and its award to the Crown leasee, Fernão Gomes, was justified to the indignant Cortes on the grounds of the King's sovereignty over the trade and his right to dispose of it 'for his better

⁹⁴ H. de BARROS, *O problema do trigo*, and V.M. GODINHO, §1 'Uma constante da economia: a escassez de pão', ch. 1, pte. III, vol. III of *Os descobrimentos e a economia mundial*, 218-231. For the rhetoric on the Portuguese as a maritime people, see Alberto SAMPAIO, 'As póvoas marítimas', in *Estudos Históricos e Económicos*, vol. I, Porto (1923) and Mário CARDOZO, in *Actas do Congresso Internacional de História dos Descobrimientos*, Comemorações do V Centenário da Morte do Infante D. Henrique Lisboa. (1963), vol. III, 35. On the projects to enlist *bombardeiros* from the Duke of Bavaria and Flemish metal-workers (*Schmelzer*), see Rui Fernandes d'Almeida's letter of 10 January 1520, C.C., pte. Ia, m. 25, doc. 97 and published in *A.H.P.*, vol. 7, (1909), 132; Fernão Lopes de CASTANHEDA, *História do Descobrimento e Conquista da Índia pelos Portugueses*, ed. Coimbra (1924), vol. I, 209.

⁹⁵ *Mercator's Letters on Portugal and its Commerce*, London (1754), 12; Lisbon factory memorial, 24 July 1765, Public Record Office C.O. 388/95, I.2. and cited in H.E.S. FISHER, *The Portugal Trade. A study of Anglo-Portuguese Commerce, 1700-70*, London (1971).

⁹⁶ *État Présent du Royaume de Portugal en l'Année MDCCLXVI* (Lausanne, 1775). See, more generally SIDERI, *Informal Colonialism in Anglo-Portuguese relations*, Rotterdam (1970).
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service and that of the Kingdom'.⁹⁷ Kingdom here would appear to be a mere extension of the King's person, rather than a collectivity of subjects. And with regards to the second, the discourse of national economic interest that one might have expected from a wide variety of Portuguese institutions (customs officials, the Lisbon municipality, the imperial administration in India), and which had been actively voiced ever since the first interdiction against foreigners was issued in 1365 by Pedro I, fell decidedly mute over the sixteenth century, at least until the Crown finally started to take a stand against the free movement of foreigners across the imperial realm in the 1590s.⁹⁸ The strongest exponent of a national interest had previously been the Cortes, the national representative body assembled from time to time at the King's volition. Complaints were launched repeatedly, by the Oportans at the Lisbon Cortes of 1439, then in the chapters presented to the King in 1459, but perhaps most clearly articulated by the Cortes of 1482 assembled at Monte-Mor O Novo, which resolved:

1. That national ships be taken on before foreigners for the carriage of cargo and freight.
2. That under no circumstances should monopolies be granted to foreigners.
3. That foreign merchants be denied *residência efectiva* either in the Kingdom, but particularly on the Atlantic islands (Madeira, the Azores, Cape Verdes).
4. That foreigners be prohibited, on their own account or anybody else's, to *tomar câmbios* or remove any of the nation's gold or silver, and that foreign cargoes be subjected to systematic inspection.⁹⁹

Not one of these resolutions could have held far into the imperial period. We have already dealt with the issue of national freight in sections 3.4. and 4.5. Monopolies, referring to the second resolution made at Monte-Mor, were extended into every imaginable realm of imperial trade, and sub-contracted without qualms to foreigners, even when the product in question, such as was the case with sugar from 1507, had previously been a matter for free trade.¹⁰⁰ Other products, such as *pau-brasil* from the New World fell to the Marchionni and Sernigi, as did malaguetta, whilst slaves (the *trato de S. Lioa*) went to the de Haro of Burgos.

⁹⁷ Royal decree of 1470 renewing and reaffirming the Gomes lease, *Descobrimentos Portugueses...*, doc. 60, p. 86.

⁹⁸ see, for example, 'Alvará para que os estrangeiros não possam ir a nenhum dos lugares das conquistas d'este Reino sem licença d'El Rei', Coll. Mss. de Leis. Extrav. T.1.f, 166v, and 'Lei proibindo a navegação, e residencia dos estrangeiros nas connquistas', Grot. de Jure Bell. T.4., 478; otherwise DA SILVA, 'L'appel aux capitaux étrangers et le processus de la formation du capital marchand au Portugal du XIVE au XVIIe siècle', #1, 348. Text of 1365 interdiction in *Descobrimentos Portugueses...*, pp. 118-19, no. 104.

⁹⁹ GAMA BARROS, *História da Administração Publica em Portugal nos séculos XII-XV*, 2 edn. (1945-54), tome IX, 116-19.

¹⁰⁰ see Duarte Leite, 'O açúcar', in *História dos Descobrimentos*, 1958: Cosmos, (1958).

As far as residence rights are concerned, every effort was actively made to accommodate the communities of foreign merchants that arrived in Lisbon in the wake of the Discoveries as indeed we have seen from the royal letter sent out to Portuguese *corregedores* in 1510; and as far as the Atlantic islands were specifically concerned, we might cite the case of the Flemish van Hurtere (Utra) family, who were donated the island of Pico in the Azores in 1482, and confirmed that of Fayal in 1491.¹⁰¹

Finally, in response to the restrictions urged on foreign movement of capital, even on account, one need only point out that the Portuguese authorities were themselves dependent upon them. The city of Lisbon placed the management of its exchange (*câmbios*) in the hands of a Florentine, Bardi, in 1470, and the Portuguese King was reliant on the coterie of sub-contractors around him, principally the Giraldi, Cavalcanti, Marchionni and Affaitati, for almost all international movements of capital on his behalf.¹⁰²

We have tried to show how each of the resolutions made by the Cortes in the name of Portuguese national interest was systematically broken early in the course of transition to empire. Later Cortes, such as those which convened at Torres Vedras in 1525 or Évora in 1535, did not even protest, focusing their complaints rather on court parasitism, extravagance, the redundancy of offices and social vices like gambling. Unlike the heated sessions of the Spanish Cortes in Valladolid in January 1518, or the outburst of the popular revolt of the Comuneros between 1520-1, the Portuguese populus over the sixteenth century seems largely to have accepted the direction of change.

Many of the precepts of dependence theory, which if *in nomine* is generally scorned within the historical profession, have nevertheless been widely taken on within recent historical work on trade. At the broadest level of historical observation, Chaudhuri admits that Wallerstein's theory is grounded on a fundamental feature of social life: the hierarchical ordering of spatial identities and sources of power.¹⁰³ Braudel, equally, from his massive turnover of historical material, has insisted that pre-modern trade, particularly, operated through a chain of subordination with the gains distributed unevenly. At a spatial level, this would manifest itself in differing prices, wages, living standards, national product and trade

¹⁰¹ Antonio Ferreira de SERPA, *Os Flamengos na ilha do Faial. A familia Utra (Hurtere)*, Lisbon (1929), 33-38.

¹⁰² see V. RAU, *Aspectos do Pensamento Económico Português durante o Século XVI*, Lisbon (1961).

¹⁰³ K.N. CHAUDHURI, *Asia before Europe. Economy and Civilisation of the Indian Ocean from the Rise of Islam to 1750* (Cambridge University Press, 1990), 383-4.
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balances. And even in the absence of detailed statistics, as in the case of our historical study, one can fall back on general rules, such as the presence of foreign merchants in a given region. In Braudel's words: 'If he rules the roost in a given city or region, the foreign merchant is a sign of the inferiority of that city or region, compared with the economy of which he is the representative or emissary'. To this my colleague Thomas Kirk would protest: to what extent can we say that the heads of international business, fully fledged multi-nationals such as the Affaitati Company who feature so much in this thesis, to what extent do these firms represent the economies of the cities, or regions they once upon a time originated in? But this cannot derail the fact that the parties that traded with the King were not Portuguese. Braudel's conclusions stand: 'Lisbon, and through Lisbon, the whole of Portugal was thus under the partial control of foreigners'.¹⁰⁴

Hermann Kellenbenz has moved closer still to world system theory with his euphemistic conceptualisation of a core region (*Hauptkraftfeld des europäischen Weltwirtschaft*) and, correspondingly, periphery, on which he places Portugal, with his references to dominance and an underlying determinance to economic positioning.¹⁰⁵ This is even more true of the Brazilian historian Manuel Nunes Dias, though he fails to attach much meaning to his discussion of 'the vassalage of the royalty' (*a "vassalagem" da realeza*).¹⁰⁶ Even in today's climate, the language of dependency is a line of investigation employed by some of the younger Portuguese historians.¹⁰⁷ Marques de Almeida, for example, suggests that the future of the spice trade was irreversibly compromised by the economic dependence (*dependência económica*) resultant from Dom Manuel's recourse to foreign capital.¹⁰⁸ Would it be too much, after all this, to implicate the language of dependency in the lengthy process of decline of the Portuguese position in the economic and financial centre of northern Europe and the closure of the Feitoria?

¹⁰⁴ F. BRAUDEL, 'The Perspective of the World', vol. 3 of *Civilisation and Capitalism*, 48 & 40 & 141.

¹⁰⁵ see, for example, 'trotz ihrer starken überseeischen Positionen konnten weder Spanien noch Portugal zu den dominanten Mächten der europäischen Wirtschaft werden. Dazu war ihre Lage zu peripher', Hermann KELLENBENZ, 'Neue und alte Welt. Rückwirkungen der Entdeckungen und Eroberung Amerikas auf Europa im 16. Jahrhundert', in *Lateinamerikanische Studien*, (1976), 32; also *ibid.*, *Die Fugger in Spanien und Portugal bis 1560: Dokumente*, Schriften der Philosophischen Fakultäten der Universität Augsburg, nr. 34, Munich (1990), vol. I, 512.

¹⁰⁶ NUNES DIAS, *O Capitalismo Monarquico Portugues*, II, 203.

¹⁰⁷ for example, Nuno VALERIO 'Sobre a divisão da história de Portugal em períodos' in CODINHO's, *Ensaio*, (1988), or Pedro LAINS E SILVA, 'Foreign Trade and Economic Growth in the European Periphery: Portugal, 1851-1913', E.U.I. Doctoral Thesis, (1992).

¹⁰⁸ António Augusto Marques de ALMEIDA *O Fim Lisboa Antuáquia* 1580 Lisbon (1989). 16.

One of the ways we might seek to avoid a clear answer, and thus refrain from taking sides in too furious a polemic, might be to position the unequal redistribution of imperial spoils as a case of public loss and private lucre, that the benefits of growth went not to the administering imperial authority but rather to coalitions of free-riding intermediaries who were largely exempt from operating costs. We could lead this argument in two ways.

The first might be along the lines of the hypothesis presented by Paul Kennedy in his *Rise and Fall of the Great Powers*, namely that state growth and revenues are always overshadowed by the burdens of political responsibilities and heavy operative costs.¹⁰⁹ It is an ingrained and irrevocable logic that imposes some organic laws on to the life course of political bodies. Portugal would be no exception. Godinho, for instance, has estimated that the Portuguese spent about half the money they sent out east on fortifications and military ventures. This was the price of a monopoly based on force and one that ultimately defeated the exercise. For once the monopoly of force had been broken by the north Europeans, the Portuguese and their spice trade were painfully exposed to competition. Having been reared under a protective carapace, Portuguese spices were so uncompetitive that Gomes Solis could demonstrate that costs exceeded market price in 1613.

Mancur Olson in the *Rise and Decline of Nations* takes off from where Kennedy leaves things in that he assumes the former's reading of the life-curve of the state and concentrates on the independent coalitions that effectively free-ride on top of the state and their role in curtailing that states's life.¹¹⁰ That subcontracting parties benefited from the Portuguese imperial infrastructure, the armed convoys, the Portuguese commercial factory network across Asia, this would seem clear. As Afonso de Albuquerque wrote to Dom Manuel:

These [speaking of foreign merchants in the Estado da Índia] who for so many years have been taking advantage of the good life here, and profit from His Royal Highnesses estate, and have themselves paid in advance from your coffers and know how to keep themselves out of the difficulties that go with war and the travails in India, and deal with His Royal Highnesses copper and pepper and other merchandise

¹⁰⁹ Paul KENNEDY, *The rise and fall of the great powers: economic change and military conflict from 1500 to 2000*, New York (1987).

¹¹⁰ Mancur OLSON, *The Rise and Decline of Nations. Economic Growth, Stagflation and Social Rigidities*, Yale U.P. (1982), especially Chapter 2. The Logic of the European spice trade, 1480-1580
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forbidden in His Royal Highnesses stipulations.¹¹¹

Unfortunately, the issue cannot be satisfactorily resolved given the difficulties of gauging with any accuracy the costs of protection and other political overheads. In any case, the benefits did not simply flow one way and were evened out in some degree by the hidden reciprocities of business relationships with the political authorities. This is particularly true of this period in which the legitimate rights and practices of business were not yet enshrined in law and were constantly open to negotiation between the King, or the State, and the entrepreneur. A merchant like Diogo Mendes obviously felt obliged to contribute to the imperial coffers two million florins for war against the Turks in recognition of the privileged status the authorities afforded him.¹¹² But at the same time, the opportunities for business were great. Charles Tilly has broadly characterised this period as an ‘age of brokerage’, in which the state relied heavily on independent capitalists for loans and for management of revenue, whether through productive enterprise or collection of taxes, and before the State started to incorporate its own fiscal apparatus.¹¹³ In this sense, private business concerns, which as we have seen at the beginning of this chapter typically sought to operate as free of politically induced burdens as possible, could not abstain from having political responsibilities thrust upon them; they were implicated in maintaining the social order. Ultimately, ‘public’ and ‘private’ are categories that melt into one another in a society where such positions were not as yet carefully worked out.

Early modern private and public enterprise cultures.

Ultimately, I would like to try and explain private lucre and public loss in the Portuguese spice trade not merely in terms of the costs of political responsibility, but as a function of different enterprise cultures, a theme touched upon in the discussion in section 11.2. Nowhere is this better reflected than in the techniques of private book-keeping, which way outstripped its public counterpart in this period.

Double-entry book-keeping, as practised hitherto by Italian firms, was popularised at

¹¹¹ ‘Essas tais que tantos anos há logram esta boa vida, e se aproveitam de vossa fazenda, e se fazem pagos de ante mão do vosso cofre, e se sabem guardar dos inconvenientes da guerra e trabalhos da Índia, e tratar com o vosso cobre e pimenta e outras mercadorias defesas por vosso regimento’, *Cartas para El-Rei Dom Manuel*, 103.

¹¹² GORIS, *Etudes sur les colonies marchandes méridionales*, 563.

¹¹³ Charles Tilly, *State Formation in Europe* (1975), (1990), 53.

Antwerp, where the practice entered common usage with Jean Christophe Ympyn's translation of the standard text, *Tractatus particularis de computis et scripturis*, into Flemish in 1543. It is commonly held that the technique conquered Germany and the Low Countries only gradually over the course of the sixteenth century. This is not strictly true. German historians have pointed to fragments of the Nuremberg Kress Company's account books which, they claim, reveal the first evidence of double-entry book-keeping in Germany going back to 1389. And for our period there is every indication that double-entry book-keeping was a norm in German speaking big business. It figures, for instance, in the *Musterbuchhaltung* of the principal Fugger accountant Matthäus Schwarz, started in 1518 and completed in 1550.¹¹⁴ The method had reached Iberia over the course of the second half of the fifteenth century, where it was enshrined in Juan de Castro's *Libro de Contabilidad*. And yet, double-entry book-keeping was not used in Portuguese public accounting, of which I have reproduced an example in the appendices, and which was hamstrung well into the seventeenth century by the prevalent use of adapted Roman numerals (*numeration luso-romaine*). Godinho refers to an incident from 1633 in which the imperial accountants in Lisbon rejected a book of expenses sent from the Indies because the entries were 'in figures'.¹¹⁵ The Kress Company's account books, by contrast, testify to the adoption of Arabic ciphers as early as 1389.¹¹⁶

But even at first glimpse, the annual book balancing of the private firm seems a significantly more rigorous exercise than Portuguese state accountancy, even if we pass over

¹¹⁴ A. WEITNAUER, *Venetianischer Handel der Fugger nach der Musterbuchhandlung des Matthäus Schwarz*, München & Leipzig (1931). One can, of course, ask oneself how important such techniques were to the practise of everyday business as Basil S. YAMSEY has done with respect to the resident merchant's control over the activities of distant factors, agents, and partners, 'Notes on Double-entry Book-keeping & Economic Progress', *Journal of Economic History*, 35, Winter (1975), 717-23. Frederic LANE has produced a synthesis which holds that although Werner SOMBART exaggerated the role of double-entry book-keeping in the development of capitalism, it did play an important role in the 'revolution' in commercial practices over the 13th and 14th century, 'Double-Entry Book-keeping & Resident Merchants', *Journal of European Economic History*, 6, (1977), 177-91.

¹¹⁵ Arquivo Histórico Ultramarino, caixa 10, cited in V.M. GODINHO, § 'Le Nombre', in *Les découvertes. XVe-XVIIe, une révolution des mentalités*, Paris (1990).

¹¹⁶ Philip BRAUNSTEIN, 'Relations d'affaires entre Nurembergeois et Vénitiens à la fin du XIVe siècle', in *Mélanges d'Archéologie et d'Histoire publiés par l'École de Rome*, Paris (1964), 243-253; Wolfgang von STROMER, 'Handel und Geldgeschäfte der Mendel von Nürnberg, 1305-1449', in *Tradition - Zeitschrift für Firmengeschichte und Unternehmerbiographie*, II/1966, 12-14; *idem*. 'Das Schriftwesen der Nürnberger Wirtschaft von 14-16 Jahrhundert. Zur Geschichte überdeutscher Handelsbücher', *Beiträge zur Wirtschaftsgeschichte Nürnbergs*, Bd. 2, (1967), 788, 793, 797.

On the differences between public and private accounting procedure, see Richard C.A. BROWN, *History of Accounting and Accountants*, Edinburgh (1905) and Dorothy REEVES, *Sixteenth Century Writings on Bookkeeping acquired by the Kress Library of Business and Economics*, Boston (MA), 1960. DE ROOVER has worked on one of the pre-eminent teachers of double-entry accounting active at Antwerp, Jan Ympyn; c.f. RAMSEY, *Tudor merchants' accounts*, esp. 185-201. GODINHO's short contribution to the *Dicionário da História de Portugal* (1960) is the best synopsis of Portuguese public accounts.

Damião de Góis's account in the *Crónica de D. Manuel* of how sacks of gold and silver were set aside at the Casa da Índia to be counted at a later date 'por não haver tempo de o contar'. For in the first instance state accounting were the quittances made to the outgoing factors on receipt of their *livros de receitas e despesas* by the Casa da Índia on their completion of office, in the case of the Feitoria de Flandres commonly once every four years.¹¹⁷ In one instance these were examined and confirmed with the factor, João Brandão, by letter of August 28, 1555 - he had left his post at Antwerp in 1526, almost thirty years previously!¹¹⁸ Measurement and controls over the economic activity of Portugal's suzerain kingdoms abroad was left for another age; the first Portuguese revenue register of the kingdom of Kotte was made only in 1599.¹¹⁹

¹¹⁷ as laid down in chap. 24 of the *Regimento de D. Manuel*, see Damião PERES, *Regimento das Casas das Índias e Mina*. All the existing *cartas de quitação* for the first half of the sixteenth century have been published in the *Arquivo Historico Portuguez* series, vol. I (1903) to vol. X (1916).

¹¹⁸ FREIRE, *Notícias da Feitoria de Flandres*, doc. III, 204.

¹¹⁹ C.R. de SILVA ed., in *The Ceylon Journal of Historical and Social Studies*, new series, V (1 & 2) 1975, pp. 71-153.
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Part III. THE STRUCTURES OF DEMAND.

8. THE CULTURAL RECEPTION OF SPICES IN EARLY MODERN EUROPE.

So far this thesis has supplied a description of the spice trade and its complicated but nonetheless tangible trajectory between producer and consumer. It has been a history of the trade, that is the mechanisms of supply, rather than of the goods themselves or the motivations underlying their demand. And yet without appreciating the nuances of demand, half of the equation furnishing the spice trade's economic performance is missing. In this next part, I investigate that demand or consumptive side as a cultural discourse. The format may be different, but the point is not lost on modern business: ever since Fordism, specialised consumer research in the guise of what kind of products will satisfy consumer wants, which sectors of the population to target consequently etc. has been standard practice.¹ However, even if such information was not systematically sought out and acted upon by trading parties like the Portuguese Crown, it is nevertheless indisputable that demand shaped such phenomena as the flows of trade through the invisible hand.² A study of the structures of demand might help us to make sense of phenomena that we have readily observed and described, such as commercial flows, which have remained up till now as complex and outwardly meaningless as the tracks of ants. It might help to explain, for instance, why pepper gravitated towards northern Europe and cinnamon to the south, or what was behind the relative collapse of pepper prices when compared to the enduring boom in fine spices around the mid-seventeenth century, and especially the arrival of a new wave of luxury comestibles: coffee, tea, sugar, chocolate, tobacco. As far as the last is concerned, in focusing upon demand perhaps we can break free of neo-Marxist theories of supply conspiracies, market strategists and industrial exploiters who favoured the promotion of plantation products on the back of slave labour in the West Indies.³

Marshall Sahlins raises the stakes by suggesting we have something of an academic obligation to protest against 'bourgeois economics' and the 'alienation of persons and things

¹ 'Marketing Research and Business Economics', in the *Encyclopaedia of Economics*, McGraw-Hill (1982).

² If marketing didn't exist, advertising did. The Fuggers had brochures - seemingly translated from Spanish tracts - issued extolling the virtues of the new-found American drug guaiacum, to which they had bought the exclusive rights from the King of Spain, see J.G. de LINT, 'Eine der ersten Guajakchriften: Nachschrift', *Janus: Archives internationales pour l'histoire de la médecine et la géographie médicale*, 37, (1933), 320-322.

³ P. KRIEDTE, 'Vom Großhändler zum Detaillisten. Der Handel mit 'Kolonialwaren im 17. und 18. Jahrhundert', in *Jahrbuch für Wirtschaftsgeschichte*, 1, (1994).
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to a higher cognitive power' in asking ourselves how demand is formulated. In 'Food as Symbolic Code', he insists that it is our duty to transcend 'conceiving the creation and movement of goods solely from their pecuniary quantities (exchange-value)', 'as if the analyst were duped by the same commodity fetishism that fascinates the participants in the process'. By ignoring the cultural code of concrete properties governing 'utility' we remain unable to account for what is in fact produced and subsequently exchanged: 'Production is a functional moment of a cultural structure', he reminds us.⁴ And that cultural structure is situated very much in the lives of men, to which Lucien Febvre appealed as a necessary human dimension in the otherwise sterile explanations habitually employed by economic historians: 'Le trafic dépend des hommes et les hommes sont les plus mouvants facteurs de l'histoire'.⁵

But we are on difficult terrain. Carole Shammas, in her own attempt to assess the linkages between taste and motivation, has reminded us that how or why people make economic decisions may not, in the last event, be knowable.⁶ My approach, then, is one that posits the issue of reception within ways of viewing and constructing a commercial object: as the marvellous (the projection of the collective imaginary which, as Lacan has shown us, necessarily operates as a 'strategy' of desire), the functional, the symbolic, the aesthetic, which is social as well as sensory, the stimulant or addictive, the substitutive. It has seemed to me that there is a sufficient and natural series of constituents to each of these considerations (notwithstanding the problems associated with their research) to make such an interpretative strategy work, and to match up to what Barthes problematised as 'a system of communication, a body of images, a protocol of applications, situations and practices'.⁷

If there is an emphasis on any of these, then it will fall on the marvellous, for it was this 'vision' that enthused these products with the rare mystery that validated and upheld their use above and beyond the commonplace. It is for this reason that I shall account for the generalised relative decline of these products from the mid-seventeenth century (charted in Chapter 10) primarily with recourse to the various manners of their demystification via the progress of knowledge (Chapter 9), a process whose inception fall into the period under study but otherwise extends in various steps through to the nineteenth century. The substitutes taken

⁴ Marshall SAHLINS, 'Food as Symbolic Code', in *Culture and Practical Reason*, Chicago (1976), 166-67.

⁵ L. FEBVRE, Preface to V. CHOMEL & J. EBERSOLT, *Cinq siècles de circulation internationale*, Paris (1951).

⁶ Carole SHAMMAS, in J. BREWER, R. PORTER eds., *Consumption and the World of Goods*.

⁷ 'un système de communication. un corps d'images, un protocole d'usages, de situations et de conduites', Roland BARTHES, 'Pour une psycho-sociologie de l'alimentation contemporaine', in *Oeuvres complètes*, du Seuil: (1995) 309.
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up for each function where spices had traditionally been employed, be it iatric drugs, synthetic scents or 'natural flavours', were themselves either newly mystified (products of little known dimensions such as the mineral or the chemical) or, in the latter case, perhaps a test-case of the Ashtor thesis: home-grown substitutes to overturn expensive, and hard-to-justify imports. In any case, trying to explain the fortunes of the spice trade in terms of the mystificatory process allows me the opportunity of exploiting a facet of the trade which M.N. Pearson, in his collection of articles dedicated to the spice trade in the Indian Ocean world, laments for its conspicuous absence in the existing historiography, for 'it is a sad fact that few of the articles.. adequately reflect the mystique of the spice trade, its glamour, its aura'.⁸

I have, in the structuring of this chapter, been torn between prioritising taste (where it is difficult to know how much was purely a hedonistic, physiological response and how much a social, or cultural construction) from medical dictate and other functional considerations as a shaping influence on demand. I believe that these are the two fundamental paradigms - in the words of the Portuguese ambassador to the Queen of England, 'ad vitam et hominum Recreationem necessaria' - which we require to understand consumption.⁹ They were strongly individuated through the contemporary discourse that sanctioned medicine as a worthy discipline striving for the true nature of things, whilst at the same time castigating that of cookery which, along with rhetoric, was considered a mere artifice, or titillator of the senses.¹⁰ Although, in the last instance, I would suggest that collective taste was a stronger force in determining which were the colonial products taken up by the European populations, I have begun this chapter within the realm of medical theory, which I have styled as the functional, in that it fairly clearly specified how it thought the human mechanism functioned and what was needed to overcome obstacles such as diseases and illness. The most cursory look at medical handbooks or pharmaceutical dispensaries (a.k.a. dispensaries) of the sixteenth century is enough to convince one of, if not quite a monopoly, then at least the key role of imported spices in medical treatment.

Reading medicinal usage as functional is problematic in that it conflicts with the notion of spices as luxuries, which by definition implies fundamentally superfluous consumption. Was medicine not too a luxury? A luxury in that, in McNeill's opinion, medicine had very little impact upon pre-modern society for its mere cost. Or a luxury on

⁸ PEARSON, M.N., ed. *Spices in the Indian Ocean World*, Aldershot (1996), xvii.

⁹ April 24, 1568, B.L. Cotton, Nero, B I, fol. 160.

¹⁰ Michel JEANNERET, *A Feast of Words. Banquets and Table Talk in the Renaissance*, Polity Press (1991), Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
80-1. This was an ancient distinction that can be traced back to Plato's *Gorgias*, 464. DOI: 10.2870/92585

account of those lists of *quid pro quo*, which set out to prescribe domestic medicinal substitutes for those costly and difficult to obtain spices.¹¹

But the need to distinguish the type of consumption underlying the pharmacopeia from that of the dining table still asserts itself. For we can be sure that the products discovered by the West in those 'new' corners of the globe invariably circulated as medicaments before slowly unleashing themselves on to the market of desire, by which I mean purely voluntary or hedonistic consumption, and jumping directly to the ease and convenience of oral ingestion. This can be observed as a general rule in the early histories of sugar, tea, coffee, tobacco, opium and chocolate alike; we can trace this dynamic even to cloves, which Orta contended were 'found quite recently, first as medicine and for the scent, and then for culinary purposes'.¹² By this time, official medical opinion no longer seemed to hold much prescriptive control over the collective will or desire; as Bernardo Silvestre intimates, 'all that helps to cure disease and favours good health' and 'all that arouses pleasant sensations and sensuous pleasure' became distinct and unrelated phenomena.¹³ In the section entitled 'Taste, or the Aesthetic', we shall investigate what sort of 'pleasant sensations' early modern man sought for in spices and thus try to transcend the tiresome justification of spices' role purely in terms of preservative effects as supplied by most modern historians.¹⁴

¹¹ William H. McNEILL, *Plagues and Peoples*, Blackwell (1976), 239.

¹² Garcia d'ORTA, *Colloquies on the Simples and Drugs of India*, trans. Sir Clements Markham, London (1913), 24. As far as sugar is concerned, Ramusio intimates that if 'tanto preziosa e divina, non si aveva in uso al detto tempo se non in poca quantità, e per conto di medicina', RAMUSIO, *Navigazioni e Viaggi* ., Milan: Einaudi, 6 vols. (1978-88) vol. II. (1979), 989. Damião de GOIS praises tobacco for its acclaimed properties as 'cousas milagrosas de que eu vi a experiencia', pte. I, ch. V, *Crónica de D. Manuel* and was widely known in Portugal as *erva santa*; from the Elder Hakluyt we know that tobacco was being cultivated in England and utilised for the relief of colds and similar ailments before 1582, see E.G.R. TAYLOR, *Later Tudor and Early Stuart Geography*, facsimile, London: University Microfilms International, London (1981) 24; cf. Nicholas MONARDES, who suggested that tobacco would cure 'pains in the head and joynts', would 'killeth worms', would help relieve toothache and would counteract the 'bytings of venomous beasts', even the poisons of Carib arrowheads, trans. Frampton as *Joyfull Newes Out of the Newe Founde Worlde*, London (1577), 76-91. In similar fashion, tea, coffee and chocolate drinking only caught the popular imagination after the medical sanction of physicians like Philippe Sylvestre Dufour, Willem Ten Rhym, Jacob Bontius, Cornelius Bontekoe (author of a popular *Tractaat* published in the Hague in 1685 if accused of being in the pay of the VOC), Nicolas de Blégnny (author of a text on 'the proper use of tea, coffee and chocolate for the prevention and for the cure of illnesses, published in Paris, 1687) and Dr. Nicolas Tulp; they were prescribed as a way of fighting migraine, heartburn, poor digestion, and sore eyes. See also the *Historical Memoirs of Duc de Saint-Simon*, vol. II, 1710-1715, ed. and trans. by Lucy Norton, London: Hamish Hamilton, 217, and specifically for chocolate, Henry STUBBE, *The Indian Nectar, or a Discourse Concerning Chocolate*, London: Andrew Cook, (1662).

¹³ Bernardo SILVESTRE, 'Cosmografia', in *Il Divino e il megacosma. Testi filosofici e scientifici della scuola di Ciurtes*, ed. E. Maccagnoli, Milan (1980), 528, cited in Pietro CAMPORESI, *Natural Symbols in Medieval and Early Modern Italy*, Blackwell (1994), 27.

¹⁴ see, for example, 'The Spice of Life', David LANDES, *The Wealth and Poverty of Nations*, London (1998), 112-13. Halkozi Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580

8.1. The framework of knowledge: the legacy of the classical world.

Granted the importance we are to attribute mystification to the buoyancy of spice consumption throughout early modern times, a phenomenon largely conditioned by ignorance, it makes sense to begin with a summary of man's state of knowledge with regard to those products. Here, early modern Europe's appreciation of the natural and physical world, together with the human applications to which its products were subjected, owed a direct inheritance to classical knowledge, which had been both faithfully preserved in written texts but also actively maintained in learned culture during the long centuries of the Middle Ages. This knowledge, as far as spices are concerned, had been inherited from previous, neighbouring civilisations, such as the pharmacopeia, which was taken from Alexandrian medical circles. But it had also been acquired through the great trade in such products that ancient Rome had conducted across the Indian Ocean from the time of Augustus until the second century A.D., and reflected Roman appreciation as much for the art of good living as for more practical applications.¹⁵

As part of the general reverence accorded to the classics during the Renaissance, reliance on bookish knowledge often constituted a greater and more authoritative truth than empirical observation, which in the scientific domain was held up as the *via experimentalis* and tinged with an unwanted aura of the superstitious dabbings of rustics, farmers and craftsmen.¹⁶ Orta confesses that even he, when in Spain, 'did not dare to say anything against Galen or against the Greeks'.¹⁷ And it was a norm within scholarly literature that criticism or personal opinion take classical orthodoxy as its point of departure. The blossoming of pseudo-antique literature, such as the enormously popular *Secretum secretorum* based upon the supposed letters of Aristotle to Alexander the Great during his Persian campaigns, and of which 500 manuscripts from the twelfth century alone are extant, reflects the standing of ancient opinion in early modern European society.¹⁸

Thus, the authors considered authoritative figures in Natural History were Aristotle (d.322 B.C.), Theophrastus (d.287 B.C.) and Pliny the Elder (d.79). The Greek versions of

¹⁵ see *The Periplus of the Erythraean Sea*, trans. and ed. by Wilfrid H. Schoff, New York (1912); J.I. MILLER, *The Spice Trade of the Roman Empire*, Oxford (1969).

¹⁶ see Jole AGRIMI & Chiara CRISCIANI, 'Medici e *vetulae* dal duecento al quattrocento: Problemi di una ricerca', in *Cultura popolare e Cultura dotta nel Seicento*, 144-59.

¹⁷ ORTA, *Colloquies on the Simples and Drugs of India*, ed. Sir Clements Markham. London (1913), 34.

¹⁸ see Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580. *Pseudonike Literatur des Mittelalters*, Leipzig (1927).

Theophrastus' *Historia plantarum*, the first great botanical tabulation of known plants, which was initially transmitted through Pliny, were included in the first printed edition of Aristotle's works, which appeared at Venice in 1497; otherwise, Theophrastus was accessible in a Latin translation of Teodoro Gaza published in 1483. Otherwise, Pliny's *Historia Naturalis* served as the most accessible text and general introduction to the natural world: before 1500 it was reprinted in fifteen Latin and three Italian versions. In the medical domain, the Renaissance was characterised by a massive return to Galen (129-99), whose work provided the point of entry into classical anatomy and pathology; R.J. Durling has charted how European printed editions of his work rose from a steady two to three between 1500-1523, to more than a dozen in the second half of the century.¹⁹ And although he was often discounted as a mere spokesman of the *prisca medicina* of his Greek predecessor Hippocrates - to Leonhard Fuchs he was 'doctissimus Hippocrates interpretes' - the formulation of western medical theory was in large part due to him.²⁰ Galen's theory was complemented by the body of pharmacological knowledge compiled by Dioscorides (1st century), the 'father of medicine', whose *De materia medica*, written around A.D. 50 (?), was widely circulated throughout the Middle Ages before it was printed in Latin in 1478, and then, with the Renaissance hunt for unadulterated texts, in the original Greek in 1499. There were at least seventy-eight editions of this work published during the sixteenth century.

It was Dioscorides' work which provided the format for botanical texts, chiefly herbals, throughout the Middle Ages and into the Renaissance.²¹ More than 600 plants were commonly listed under their name and current synonyms (sometimes accompanied by an etymology); there followed a description of the plant (*rhapsodia*), including habitat, and other practical information which subserved its therapeutic uses, for example, phenological data, especially the proper time to collect and the part or portion to be used; the virtues of the plant in question, often in terms of the four qualities (*temperamenta*); and instructions regarding preparation, administration, dosage and storage.

¹⁹ R.J. DURLING, 'A chronological census of Renaissance editions and translations of Galen', *Journal of the Warburg and Courtauld Institutes*, XXIV (1961), 230-305.

²⁰ FUCHS, *Methodus seu ratio compendiaria per veniendi ad culmen medicinae: nunc denuo omni cura recognita: ejusdem De usitata hujus temporis componendorum, miscendorumque medicamentorum ratione, libri tres*, (Lugduni, 1550), 4; more generally, Andrew WEAR in V. NUTTON, *Galen in the Renaissance: Problems and Prospects*, A Collection of Papers Submitted at the 1979 Cambridge Conference, Wellcome Institute, London (1981).

²¹ Jerry STANNARD, 'Dioscorides and Renaissance Materia Medica', in M. FLORKIN ed. *Analecta Medico-Historia*, 1, (1966): 1-21 and *ibid.* 'Medieval Herbals and their Development', *Clio Medica*, 9, (1974): 23-33; Charles SINGER, 'The Herbal in Antiquity and its Transmission to Later Ages', *Journal of Hellenistic Studies*, 47: 1-52 (1927); Ki Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580

If classical writings on spices assumed many different forms, we can nonetheless distill a certain typological scheme according to function. Classical knowledge broadly arranged spices into products of medicinal application (*species medicinales*), often as drugs (*materallia*) and with a sub-grouping *theriaca*, concerned with antidotes to poisons, but also fragrance-givers (*aromata*), taste-enhancers (*condimenta*) and industrial dyes (*pigmenta*). This was by and large the same functional classification made in the sixteenth century world, just as the interpretative scheme, whereby qualities were ascribed and harnessed for medical application, was by and large that advocated by Galen during the second century A.D., as we shall see shortly. This tradition overrode the interference of two successive schools of knowledge: first, the Arab science of great schools such as Jundi-šapur passed on to Europe in the early Middle Ages and epitomised in the Salernitan school of medicine; second, the tradition of indigenous herbal medicine, kept alive through oral tradition, which competed for the attention of pharmacists and ultimately engineered the rejection of oriental spices in favour of more 'natural' remedies. But in some ways these disparate traditions had been gently adopted into the classical canon. The late Roman medic Marcellus admitted that he had chosen to include 'even remedies chanced upon by rustics and the populace and simples which they have tested by experience'.²² The Arabs, who themselves learnt much from the Persian Sassanids, added some twenty to thirty new drugs to the medieval pharmacopia from as far afield as Tibet and east Africa, even if the sixteenth century translator of Aetius, Janus Cornarius, had to admit that knowledge of Arabic pharmaceuticals was only to fill the lacunae and inclarities remaining from Greek interpretation and Italian commentators, contrary to d'Orta's otherwise favourable opinion, were reputed for their keenness to denounce Arab writers as barbarian Mohammedans (*Maumetistas bárbaros*).²³ But perhaps the point to stress is that, like the trade in spices itself, there were no paralytic interruptions in the transmission of medical knowledge from the time of Alexander the Great until the period we are studying. Even at the height of the so-called Dark Ages, the Sephardic traveller Ibrahim b. Ya'qub could note that a provincial capital of Carolingian Europe like Mainz was well stocked in the spices of India and the Far East.²⁴ And second, that even with the new departure we call European

²² MARCELLUS, Empiricus. *Marcelli de medicamentis liber*, ed. Maximilian Niedermann, Berlin (1916), 2.

²³ 'Epistolae ad Carolum V' published as a preface to Cornarius' 1535 edition of the translated works of Aetius; Garcia D'ORTA, as cited in A.J. ANDRADE DE GOUVEIA, *Garcia d'Orta e Amato Lusitano na ciência do seu tempo*, Lisboa (1985), 27, 71.

²⁴ cited by Michel BALARD, 'L'Impact des Produits du Levant sur les Économies Européennes (XIIe-XVe siècles)', paper given at the XXIX Settimana di Studi, Istituto Internazionale di Storia Economica F. Datini, April 1997, Prato. Compare this with the traditional view, promulgated by Henri Pirenne and his school, that the

expansion and the profound dialogue with different parts of the world that it entailed, the domestic theoretical canon proved itself robust enough once again to accommodate new and unheard of spices from the East such as china root (*Smilax china*), with all the properties already attributed to it in the East, without any apparent harm to the prevailing system of medical interpretation or intervention.

8.2. The Marvellous and the medieval imaginary.

The collective perception of late medieval Christendom located and associated spices firmly with the East. With the Renaissance passion for allegorical personification, a standard iconographic representation of Asia was of a richly adorned woman, sitting on an elephant holding twigs of clove and nutmeg (see Figure 2). Beyond this, there was a fairly widespread knowledge across Europe of what the products looked like in dried form, broken up as dried seeds, bark, leaves and roots, and what kind of prices they commanded on the European market. This latter was the kind of information set down in trading compendia and handbooks of the period.²⁵ The plants' origins, habitat and methods of cultivation, by contrast, were subjects of considerable mystery, and indeed were by and large ignored apart from the patchy and spurious information set down by the Ancients, particularly Pliny's *Historia Naturalis*, and a few scattered reports.²⁶ Of these, Marco Polo's *Asia* went further than any previous text in pinpointing the provenance of the valuable spices of commerce.²⁷ Then, in the

Muslim advance of the seventh and eighth centuries broke commercial relations between East and West and that 'di conseguenza il pepe in Occidente divenne scarso come non mai', see Carlo CIPOLLA, *Allegro ma non troppo. Pepe, vino (e lana) come elementi determinanti dello sviluppo economico nell'età di mezzo*, Bologna: Il Mulino, (1988), 16. Cipolla's facetious argument is that pepper, rediscovered with the Crusades into the Holy Land, and in its capacity as an aphrodisiac, raised European self-contentedness, engineered a demographic boom and launched the continent on the path to self-sustained growth, 24-27.

²⁵ see, for example, Francesco Balducci PEGALOTTI's *La pratica della mercatura* ed. Allan Evans (Camb. Mass., 1936), pp. 293-97 ('Nomi di Spezierie'); B. di PASI, *Tariffa dei pesi e misure, corrispondenti dal Levante al Ponente. . .*, (Venezia, 1557), 188, which counts 44 types of spice. In the German language, the most comprehensive is *Das Meder'sche Handelsbuch und die Welsler'schen Nachträge*, Nuremberg (1576), re-edited with an introduction by H. KELLENBENZ, Wiesbaden (1974).

²⁶ Odoric of Pordenone, for example, described the cultivation of ginger along the Malabar coast, see his text of 1330 in *Sinica Franciscana: Itinera et Relationes. . .*, ed. P.A. van den Wyngaert, 2 vols., Quaracchi, (1929-38); also Reinhold RÖHRICHT & Heinrich MEISNER, 'Ein noederrheinischer Bericht über den Orient', *Zeitschrift für deutsche Philologie*, 19 (1886), 1-86, especially pp. 69 ff. which describe *seriatim* stones, animals, birds, and plants purportedly seen between ca. 1338 and 1348.

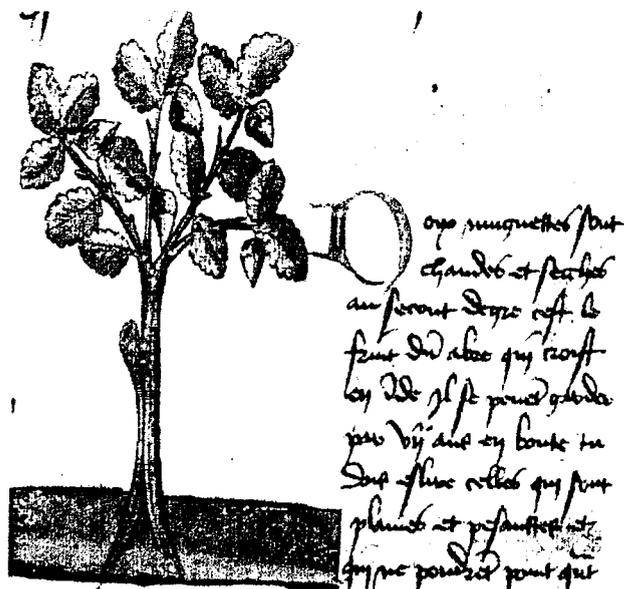
²⁷ Marco's account, written down by Rustichello of Pisa, circulated widely in a number of different forms and languages even before the author's death in 1324 (hence its Italian name *Il Milione*). Ramusio famously declared that 'all Italy in a few months was full of it' (Tutta Italia in pochi mesi fu piena), Preface to the second vol. of *Navigazioni e Viaggi*, Venice, (1559).

Figure 2. Iconographic symbols of Asia



Peter Plancius, *Orbis terrarum typus de integro multis in locis emendatus*, (1594), cat. 145.

Figure 3. The imaginary of early modern Europe.



'Noix muguettes. . cest le fruit dun abre qui croist en Inde'.
The nutmeg tree, such as it was imagined in medieval Europe, miniature from the *Livre des simples medicines*, (14th century), ms. IV 1024, fo. 149, cat. 63, Bibliothèque Royale Albert I, Brussels.



Cinnamon cultivation. The trees are depicted fancifully, but the twills – which reached European markets - accurately. From A. THEVET, *La cosmographie universelle*. , Paris, (1575), 436v.



fifteenth century, Poggio Bracciolini, who summarized the travels of Nicolò de' Conti in the East, described in some detail the cinnamon tree of Ceylon and the cultivation of ginger in India.²⁸ Indeed, it has been affirmed that 'many of the plants of the East, unlike those of the Americas, were already firmly established in the plant world known to Europeans before the discovery of the water route to India'.²⁹

I would dispute this. As spices, the products were readily recognisable and, hence, definable. As plants, available knowledge was too scanty and unclear to enable the botanist to come away with a clear view. Mistakes abound, as we can see in the miniature of the nutmeg tree contained in the fourteenth century *Livre des simples médecines*, which is depicted as an oak tree complete with acorns (see Figure 3).³⁰ Elsewhere, Ludovico di Barthema (also written Varthema), claiming to corroborate centuries of botanical tradition, draws the most improbable likeness between the nutmeg and a peach tree (*quiere parecer a el arbol en que nasceu los duraznos*), and suggests, equally fallaciously, that the mace clings to the fruit like an 'open rose' (*quasi como rosas floridas*).³¹ It was this gap between knowledge of spices and the plants that produced them which provided the cue for imaginative invention and which formed part of the lengthy tradition of fanciful speculation from within the ranks of scholastic cosmography, but which drew equally on oral and popular belief. Often these fables were developed along the lines of half-told truths reported by returning merchants and travellers; sometimes they were fictions spread by Arab middlemen keen to retain their long-standing monopoly of purveyance to Christian consumers. In any case, empirical truth was no goal in itself. The resultant anecdotes and fables were written up either as travel accounts (of which the most kaleidoscopic, Sir John Mandeville's, was entitled 'Of divers kingdoms and countries and isles towards the east part of the world, wherein are many divers folk and divers kinds of beasts, and many other marvellous things'), inserted willy nilly into Italian chronicles of the Quattrocento, celebrated in popular poetry, or collected and put together as

²⁸ Poggio BRACCIOLINI, *Historia de varietate fortunae*, 1447-8, Book IV. The first complete printed edition of Conti's account came out as *India recognita* in Cremona in 1492.

²⁹ D. LACH, *Asia in the making of Europe...*, Chicago (1977), vol. II 'A Century of Wonder', § 'Botany', 428.

³⁰ Bibliothèque Royale Albert Ier, ms IV 1024, fo. 149, cat. 63, Bruxelles.

³¹ Lodovico BARTHEMA, *Itinerario del venerable varon micer Luis patricio Romano: enel qual cueta mucha parte dela ethiopia Egipto. . .*, Seville (1520), fo. xliii v. & r.; cf. the debate aired by O. WARBURG, 'Wer ist der Entdecker der Gewürz Inseln (Molukken)?', *Verhandlungen der Gesellschaft für Erdkunde zu Berlin*, XXII, (1896), 106-35.
(Hlebowit-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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loose encyclopedias of the weird and wonderful, often accompanied by illustrated miniatures.³² These became known as Books of Fable or Marvels and, as the genre would suggest, the reading public was expected to respond emotionally with marvel at a stream of incredible facts and anecdote that it was encouraged to hold for true.³³ As Jacques Le Goff explains: 'Marvels were easily and seamlessly integrated into everyday life. . . There was a tendency to characterise marvels as rarities rather than supernatural phenomenon, as unexplained rather than inexplicable events. Marvels took place on the fringes of this world, not in another world'.³⁴

The American anthropologist Stephen Greenblatt has gone so far as to define the European reaction to the Discoveries principally in terms of the 'wonder of the New World'. The wonderful - which, given the dual West Germanic and Norman French inheritance of the English language, I think can be equated with the marvellous - was not, however, merely a product of concrete ignorance, in his words, 'so new that for a moment at least it is alone, unsystematised, an utterly detached object of rapt attention'.³⁵ It was closely tied up with the specific attributes ascribed to the East, in the opinion of Albert Deman, its abundance, its luxury and its exuberance, ideas which are not limited to the sixteenth century but go back to the first encounters between East and West in deep Antiquity and which implied 'superior forms of life'.³⁶ From these basic conceptions, compilations of all the fabulous stories of the East had sprung, texts such as those produced by Ktesias the Knidian and Megasthenes at the

³² MANDEVILLE, Sir John. *Of divers kingdoms and countries and isles towards the east part of the world, wherein are many divers folk and divers kinds of beasts, and many other marvellous things*, first printed by Wynkyn de Worde (1499); cf. the extremely popular volume of fictional geography written in Florence around 1400 by Andrea da Barberino and reprinted in innumerable editions from 1473 under the title of *Guerin Meschino*, also a 'description of the provinces of the whole earth and the variety of men, peoples and their customs', see R. PETERS, *Ueber die Geographie im 'Guerino Meschino'*, Halle (1908). For the poems on the marvels of the East, see Leonardo OLSCHKI, 'I cantàri dell'India di Giuliano Dati', *La bibliofila*, XL, (1938), 289-316.

³³ see, for example, *Livre des Merveilles*, Paris, Bibliothèque Nationale, ms fr. 2810, c.1410; Brunetto LATINI's *Il Tesoretto: the Little Treasure* of c.1260, trans. by J. Holloway & repr. in 3 Italian eds. 1474-1533; Friar JORDANUS, *Mirabilia Descripta*, ed. and trans. by Yule in *Cathay and the Way Thither*, Hakluyt Society edition, (1929); JORDAN OF SÉVÉRAC's *Book of Marvels (Mirabilia)*, c.1340, ed. H. Cordier, Paris (1926) and cogently discussed in Sir C.R. BEAZLEY's *The Dawn of Modern Geography*, London (1897), vol. III, 227-29; 'De Mirabilibus Indiae', in Pierre d'AILLY's *Imago Mundi* (1410), ed. E. Buron (1930); Marco Polo's account was passed on into the French language as the *Livre des merveilles du monde*, or the *Livre des diversités* cf. 'Marco Polo and the pictorial tradition of the Marvels of the East', vol. Oriente Poliano, Istituto per il Medio Estremo Oriente (Roma, 1957), as well as R. WITTKOWER, 'Marvels of the east', *Journal of the Warburg and Courtauld Institutes*, vol. V (1942), 159-197. The authoritative edition of Mandeville's travels to which scholars turn is considered to be that of C. Deluz, *Voyage autour de la terre*, Paris (1993).

³⁴ Jacques LE GOFF, *The medieval imagination*, trans. University of Chicago (1992), 39.

³⁵ S. GREENBLATT, *Marvelous Possessions. The Wonder of the New World*, Oxford (1991), 14.

beginning of the fourth century B.C., and which later scholars of great stature, such as Pliny, had enthusiastically adopted.³⁷ Pliny dutifully acknowledges his starting point as ‘the wonder of the victorious expedition of Alexander the Great when that part of the world was first revealed’ (*quas mirata est Alexandri Magni victoria orbe eo patefacto*).³⁸

Spices take their place in the earliest formulations of the wonders of the East. The air there was purported to be thick with aroma: Alexander, according to Pliny, was enraptured by the ‘indescribable sort of collective odour given off from the whole of the [Arabian] peninsula.. under the reflected rays of the sun at midday, which is due to the harmoniously blended exhalation of so many kinds of vapour’. There is biblical reference in the Songs of Solomon and the Book of Proverbs to ‘the spicy breezes’ of the East; two millenia later, Milton evoked those same ‘gentle gales. . . [which] whisper whence they stole their balmy spoils’.³⁹

Many of these spices, just as they were presented entwined in golden filigree, contained in silver halters or presented in elaborate table-pieces (see Figures 8 & 9) so as to connotatively reinforce their value statement, were fed into other marvellous tales so as to enhance their specialness. An account ascribed to Tacitus held that the phoenix:

the rarest bird in the world, and of which there was never any but one of this kind living at one time.. liveth above 600 years, and being old builds him a nest of Cinnamon and the twigs of Frankincense, which he fills with spices, and then with the laboring of his wings in the Sun, setting it on fire, is there consumed; out of whose ashes there grows a worm. . .⁴⁰

Herodotus tailored this fable to the cryptic origins of the spice trade by suggesting that such spices needed to be brought back down from birds’, such as the phoenix’s, nests; to this end, they were knocked down from inaccessible rocks and trees by the birds themselves, or by arrows weighted with lead. In like manner of embroidery, cassia was held to grow in marshes under the protection of terrible bats that guard with their claws, while the aromatic trees of Arabia were infested with winged serpents, of a small size but of varied aspect, whose one

³⁷ J.W. McCRINDLE, *Ancient India as described by Ktesias the Knedian. . . Being a translation of the abridgement of his ‘Indika’ by Photios, and of the fragments of that work preserved in other writers*, repr. from the ‘Indian Antiquary’, (1882) and IDEM., *Ancient India as Described by Megasthenes and Arrian*, repr. (1973). PLINY, *Historia Naturalis*, 10 vols., vol. IV, libri XII-XVI, ed. H. Rackham, London repr. (1968).

³⁸ PLINY, *Historia Naturalis*, bk. III, X.

³⁹ MILTON, *Paradise Lost*, Book IV, lines 156-9.

⁴⁰ cited from Thomas BLOUNT, *Glossographia* (1656), @24222767, in Early Modern Dictionaries Database (EMEDD), ed. Ian Lancashire, Oct. 15, 1999, <http://www.utoronto.ca/english/emedd/>. DOI: 10.2870/92585

bite would provoke instant death, and which were obliged to be smoked out before the resin could be collected.⁴¹

The herbals and botanical texts of the early modern period, usually a reliable source of practical information, were prone to such tales formulated in the classical tradition and carried on in the wonder of Christian revelation.⁴² Lönitzer's *Kreütterbuch* incorporates such myths as that of the Barnacle goose tree (*De ave que vulgo dicitur bernekke*), reputedly born of rotting wood floating in the sea, and even ventures beyond the strictly vegetal world into the curious histories of objects such as the bezoar stone (see Figure 9), whose widely esteemed efficacy as an anti-poison was justified by the supposition that the deer from which the stones came were fond of killing snakes and then eating them, after which they would proceed to a stream or pond where they would stay until the snake's venom was purged through their eyes. The presence of the bezoar stone in the deer's stomach or intestinal tract was considered the means by which the poison was expurged, and the animal's life sustained.⁴³

Marvellous material, then, finds its way into every part of any medieval account of the East. Even an eye-witness account of the flora, fauna and ethnology of Palestine in an otherwise non-descriptive, historical genre, a crusading chronicle, undertaken by a commentator settled twenty years in the land, Fulcher of Chartres, gives way to a recapitulation of the wonders described by 'that most sagacious investigator and skilful writer' Solinus, Pliny's third century epitomizer, even if they largely concern themselves with the animals and monsters of Egypt and India. As Mary Campbell observes, 'since he [Fulcher] is writing about the East, he must include the marvellous material, but since the East has become Home, that material must belong elsewhere'.⁴⁴

We have sketched, then, the underlying climate of thought in the West which

⁴¹ PLINY, *Historia Naturalis*, 10 vols., vol. IV, libri XLII. ed. H. Rackham, London repr. (1968); *ibidem*, XII, 8, 17, 34, 81, ed. Jan-Mayhoff, II, 287, 300; HERODOTUS, *The Histories*, Bk. III, 107-8, 110, (trans. Aubrey de Sélincourt, Penguin Books repr. 1981, 248-9).

⁴² see, for example, M. LAURENT, 'Le phénix, les serpents et les aromates, dans une miniature du XII^e siècle', *Antiquité classique*, 4, (1935), 375-401.

⁴³ cf. the justification supplied by José Acosta: 'there is a herbe amongst all venemous herbs. . well known of the Vicugne [a species of Peruvian chamois], by a naturall instinct, and of other beasts that ingender the Bezoar stone, which eat this herbe, and by meanes thereof they preserve themselves from the poisoned waters and pastures: and they say that of this herbe the stone is compounded in the stomacke, whence it draws all the vertue against poison, and other wonderfull effects'. ACOSTA, 'Of the Bezoars Stone', in Samuel PURCHAS, *Hakluytus Posthumus*. ., repr. Glasgow (1905-07), ch. 42, 145-146.

⁴⁴ Mary CAMPBELL, *The Witness and the Other World: exotic travel writing, 400-1600*, Ithaca: Cornell U.P. (1988), 133; from FULCHER OF CHARTRES, *A History of the Expedition to Jerusalem, 1095-1127*, trans. Ryan, University of Tennessee Press (1969) the European spice trade, 1480-1580
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proceeded to mystify the origins of oriental spices, and the goods themselves, and which went as far as the invention of wholly fictitious plants, we have searched for the origins of this process which, given the early modern world's epistemological reliance on classical texts, continued to permeate European thought until the seventeenth and eighteenth centuries.

Spices and the terrestrial paradise.

Despite the Church's intrinsic ideological opposition to the notion of the marvellous as opposed to the miraculous, in that the latter implied God's saving grace, the marvellous dimension surrounding the world of spices was perhaps crowned by a series of myths linking the provenance of spices with a Christian terrestrial paradise of unspecified but varied location in the East.⁴⁵ The paradise myth from Genesis was presented by most patristic commentators literally, as a historical reality, though there was some discussion as to whether it had survived the Flood. The majority opinion since Isidore of Seville was that the terrestrial paradise constituted a place of enduring fact, and this was subsequently upheld throughout the Middle Ages, just as Ireland and Sicily were taken to be the sites of Purgatory.⁴⁶ The location of paradise remained however something of an ongoing controversy among medieval authors, and most particularly for mapmakers: notwithstanding Mosaic instruction that Eden was 'towards the rising sun' (Genesis 2,8) utopia was variously projected on to the islands of the mid-Atlantic, which around the mid-fourteenth century were slowly emerging from hazy associations with Atlantis, the Isles of the Blessed and the Hesperides, to a Columbine discovery somewhere in the New World, to a number of possible moorings somewhere in the Orient or Southern Ocean (*Oceanus meridionalis*).⁴⁷

⁴⁵ though Augustine tried hard to come to the aid of the Church, arguing that *mirabilia* were manifestations of divine authority that man could not understand. 'If we read or hear told of such and such a marvel regarding a certain stone of India, and this does not fall into the realm of our experience, surely we will consider this a lie or else we shall remain greatly marvelled. . . thus it is with the *prodigia* of India, which is a region of the world far from us; we must allow ourselves to admire what can be brought to us for us to admire'. Ultimately, Augustine blurs the distinction between miracle and marvel, reducing both to the notion of divine portents (*portenta*), for which he relies on the Roman writer Marcus VARRANUS, *De Gente Populi Romani*, SAINT AUGUSTINE, *A Cidade de Deus*, trans. for the Fundação Calouste Gulbenkian, Lisbon (1993-6), bk. XXVI, ch. IV. See for the context in which Augustine was writing, Henri-Irenée MARROU, *St. Augustin et la fin de la Culture Antiquie*, Paris: Boccard (1958) and, more specifically, for the concepts of *monstra*, *ostenta*, *portenta*, *prodigia* Jean CÉARD, *La Nature et ses prodiges. L'insolite au XVIe siècle*, Geneva: Librairie Droz (1996).

⁴⁶ Isidore of SEVILLE, *Etyimologirum*, bk. XIV, ch. 3, nr. 2; H.R. PATCH, *The other world according to descriptions in medieval literature*, Cambridge Massachusetts (1950), 143; Jacques LE GOFF, *La naissance de Purgatoire*, (Paris: Gallimard, 1982).

⁴⁷ J. DELUMEAU, *Une histoire du Paradis: le jardin des délices*, Paris (1992), 70; A. GRAF, 'Les merveilles du Paradis Terrestre', in *Miti, Leggende e Superstizioni del Medio Evo*, (1964), Turin (1892-3), vol. I, 1-238 on the different locations of Paradise; also Ernst BLOCH, "Geographical Utopias", ch. 2 of *The Principle of Hope* (Oxford: Basil Blackwell, 1986). The earliest example of a schematic T-O map with a

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The source of the myth was the Garden of Eden, mankind's first home which God had created for him, where the climate was always mild and the trees flowered and bore fruit continuously: from the outset, then, suggestive of those three properties of abundance, exuberance and luxury that Deman has suggested were associated by medieval European man with the lands of the East. Isidore, moreover, translated Eden - a Hebraic term - into Latin as *hortus deliciarum*. Although the Book of Genesis does not specify what precisely grew on these trees - 'the Lord God made sprout from the earth all kinds of tree of pleasant appearance and providing sustenance' - the *hortus deliciarum* may have been confused in the mind of the medieval Christian with the *hortus conclusus* mentioned in the Song of Songs, which specified:

A spring enclosed, a
sealed fountain.
Your plants are an orchard
of pomegranates
with choice fruits,
with henna and nard,
nard and saffron,
calamus and cinnamon,
with every kind of incense tree,
with myrrh and aloes
and all the finest spices.⁴⁸

In any case, a series of myths present themselves which served to link spices with the notion of terrestrial paradise, beginning with an anonymous cosmographical text of the fourth century A.D. referring to a people called the Camarines, who lived in Eden and fed on a daily bread that fell out of the sky and a brew of wild honey and pepper.⁴⁹ Subsequent commentators like John de' Marignolli, papal legate to the Great Khan (1338-53), and Godfrey of Viterbo, a twelfth century ecclesiastic, cited the existence of 'trees of paradise', from which the leaves

depiction of Paradise in the East can be seen in a ninth century manuscript preserved in the Biblioteca del Escorial (ms. 1, P 8, fol. 187).

⁴⁸ *Book of Genesis*, 2, 8-17. *Etyimologiae: Patr. Lat.*, t. 82, 2, c. 496; *Song of Songs* (4, 12-14); Arnold Williams, *The Common Expositor. An account of the commentaries on Genesis 1527-1633*, Chapel Hill (1948).

and fruit were carried forth by the four great rivers of the biblical *ecumene*, the Tigris, Euphrates, Phison and Gyon.⁵⁰

What precisely was considered to grow on these trees? This was never made particularly clear - the Greeks, from whom the term had been inherited, said that a paradise provided every sort of good thing that grows - though Hugo de S. Victor talked of Paradise as a spot in the Orient 'productive of all kinds of woods and pomiferous trees', while medieval iconography was keen to depict the terrestrial paradise as flanked by the Trees of Life and Knowledge of Good and Evil (see Figure 4), and which were speculated upon in herbals.⁵¹ While the former, or *Arbor vel lignum vite paradisi*, was standardly depicted as a fairly banal natural specimen with thick, elliptical leaves and without visible fruit, albeit with a half-woman, half-snake coiled around its trunk, as in the *Ortus Sanitatis* printed by Jacob Meydenbach in Mainz in 1491 (see Figure 4), the latter was iconographically represented flanked by Adam and Eve, who is stretching to pick an apple-like fruit.⁵² These were the apples of paradise (*pomas de paradisi*) commented upon amongst others by Mandeville, claiming that they could be found amongst other places in Egypt: they were reputedly of good savour and, if cut up into segments, revealed inside the sign of the cross (*et si vos la fendedes por pieças en travers sempre trovares en medio la senāl de la cruz*).⁵³ This stark physical description of the fruit vitiated against any convincing projection of paradise on to the tangible realities of the spice trade. More suggestive, rather, were the ancient scriptures where it was stipulated that he who ate of the fruit 'should be clothed with blessed immortality, and should not be fatigued with infirmity, or anxiety, or lassitude, or weariness of trouble' (Genesis 2,9). Here, then, might appear a connection with the tradition vaunting the potion of everlasting youth which, as we shall see from Villanova's recipe in the next section, was in the real world actively constituted of oriental spices. Typically, however,

⁵⁰ MARIGNOLLI, *Relatio in Sinica Franciscana*, Florence (1929), t. I, 352. An English translation, edited by H. Yule, has been published along with other accounts in *Cathay and the Way Thither*, vol. III. (1913-5); GODFREY OF VITERBO, *Liber universalis*, (1187).

⁵¹ DIODORUS SICULUS, *Bibliotheca historica*, trans. as *The Library of History*, ed. C.H. Oldfather, C.L. Sherman, C.B. Welles, R.M. Geer, F.R. Walton, Camb. Mass & London: Harvard Univ. Press, (1933), bk. 14.80.2 and bk. 19.21.3; XENOPHON, *Oeconomicus*, ed. Raffaele Maffei, Parisiis: (1512), 4.13-14 and *Anabasis*, Lipsiae: Ed. minor. (1905), 1.4.10. A discussion of the etymology of the term paradise takes place in M.A. DANDAMAEV & V.G. LUKONIN, *The Culture and Institutions of Ancient Iran*, Cambridge: C.U.P., (1989), 143. Hugo de S. VICTOR, *De situ Terrarum*, in CLCLT (CETEDOC Library of Christian Latin texts) CD-ROM.

⁵² see, for example, frontispiece to Part I of Theodore de BRY's *Great Voyages*, which first came out at Frankfurt (1590-1634), but is reproduced in *The New World. The first pictures of America, made by John White & engraved by Theodore de Bry*, pte. I 'America', New York: Duell, Sloan & Pearce, (1946).

⁵³ cited in Maria Adelina AMORIM, 'Viagem e mirabilia: monstros, espantos e prodígios', in CRISTÓVÃO Halikowski Smith, Stefan (2001), *Portugal and the European spice trade, 1480-1580* ed., *Contribuição para a cultura da literatura de Viagens*, Lisbon: Cosmos (1999), 153. DOI: 10.2870/92585





God inducts Adam and Eve into the Garden of Eden, framed by the Trees of Knowledge, or Good and Evil. The four biblical rivers issue from the fountain of life, and the terrestrial paradise is carefully encircled by an enclosing wall, Ludolphus of Saxonia, *Leven Jhesu Christi*, (1503), repr. Leiden: Brill (1980).

Adam and Eve and the Tree of Knowledge, a frontispiece to Part I of Theodor de Bry's *Great Voyages*, Frankfurt (1590).



Arbor vel lignum vite paradisi, the Tree or Wood of Life, from the *Ortus Sanitatis*, Mainz: J. Mayenbach, (1491).

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the chief constituent was *lignum aloes*, a rare and aromatic wood that could readily accommodate the projections of the myth of the Tree of Life and descriptions such as Hugo de S. Victor's. But when *Guaiacum*, a recently discovered New World drug from a couple of species of tree of the *Zygophyllaceae* family, was popularised for its relief of the new scourge of syphilis, it too was heralded not only as 'holy wood' but *lignum vitae* itself.⁵⁴

But it is also the manner in which the leaves and fruit of the trees of paradise were epitomised that gives us reason to believe that there was a strong enough association to breach the real/imaginary divide. We are told that they were known for their 'medicinal virtue and fragrant odours, delicious for the food of man'. These were precisely three of the classificatory epithets that the Romans attached to oriental spices - *pharmacia*, *aromata*, *gastronomia* - and whose scheme persisted through early modern times.⁵⁵

Other leads reconcile the topos of spice provenance and the terrestrial paradise. From the time of Giovanni Marignolli's account, tradition was keen to attribute Paradise to the vicinity of Adam's Peak, where the grave of man's primal ancestor was said to have been, so lofty it could only be ascended by chains. This peak was understood to be on the island of Ceylon, which in Marignolli's words, 'is a place that exists in the Ocean Sea, in the regions of the Orient on the other side of Columbine India'.⁵⁶ The source of this myth would appear to be somewhat confused. Adam's grave had often been linked with the tomb of St. Thomas, located somewhere along the Malabar litoral.⁵⁷ Now, if it is true that Ceylon does indeed boast a celebrated peak, a major source of Buddhist pilgrimage, and was suitably far away, was this enough to accommodate the Christian myth of the terrestrial paradise? Marignolli embroidered the myth somewhat so as to correspond to the biblical description - he claimed that on certain days it was possible to hear the rush of waters descending to irrigate the garden of Eden, and that for an instant he was able to behold Paradise itself as a naked flame - but this had nothing to do really with the locality itself. Might it not rather

⁵⁴ Robert S. MUNGER, 'Guaiacum, the Holy Wood from the New World', *Journal of the History of Medicine*, 4, (1949): 196-229. Dürer referred to *lignum guajacum* as *lignum vitae* in 1520, in J.G. LINKS, *Travellers in Europe*, 117.

⁵⁵ L. FRIEDLÄNDER, *Roman Life and Manners*. . . , trans. (1908), 108.

⁵⁶ in YULE, *Cathay and the Way Thither*, vol. II, 346; Duarte (Odoartus) BARBOSA is also accredited with thinking paradise to be located in Ceylon, Salomon van TIL, *Dissertationes philologico-theologicae*, Leyden (1719), Liber tertius, caput VI. Dante suggested that the terrestrial paradise lay upon a mountain in the southern seas, at the centre of the southern hemisphere, exactly opposite Jerusalem, *Divina Commedia*, inf., c. XXXIV, vv. 112-7.

⁵⁷ see Ernst Georg RAVENSTEIN, *Martin Behaim: his life and his globe*. With a facsimile of the globe printed in 1492, and seventeen illustrations, London (1908), 89. Halikowski Smith, Stefan (2001), Portugal and the European Spice Trade, 1480-1580. European University Institute DOI: 10.2870/92585

have had something to do with the fact, spread by travellers such as Nicolò de' Conti, who in return reported to Pero Tafur, that Ceylon was a great mountain where among many other things 'very fine cinnamon is grown'?⁵⁸

However, despite the widespread conviction that the terrestrial paradise existed in some distant reach of the earth and efforts to place it, medieval commentators tended to draw a thin dividing line that separated the 'paradys terrestre' from the strictly earthly. This is what Howard Patch has called the 'negative description'; the construction of a place that could not verily be visited, and perhaps served primarily to distinguish 'wicked doers' from 'the Creator's might'.⁵⁹ This idea is presented according to various, often subtle, but manifest conventions. The idea that paradise was the fount of the great rivers of the world necessitated altitude; it was consequently a short leap from 'the highest mountain' to the simply celestial, to a paradise within 'the sphere of the moon'.⁶⁰ In some descriptions one was physically prevented from entering paradise, whether by a ring of fire, a high wall or else by the brandishing of a cherubim's sword, as is depicted in the famous Hereford mappamundi of Richard of Haldingham, Andreas Walsperger's world map of 1448, and that of Andrea Bianco (1436) respectively.⁶¹ Often, it was winds - as we have seen, a classical motif in the construction of a wonderous East - that linked the fragrant groves of paradise with their earthly counterparts. Saint Athanasius, in his dialogue *Quaestiones ad Antiochum*, writes of 'fragrances that are carried out of Paradise on the breath of the wind, rendering the trees of the neighbourhood fragrant' (*sic fragrantia quae ex paradyso ventorum afflatu exit, arbores locorum illorum viciniore fragrantes efficit*), just as in the Arab Masudi's tenth century account, Adam left Paradise 'covered in leaves which, once dried up, were carried by the wind across India, giving origin to all the aromas of that region'.⁶²

⁵⁸ Pero Tafur: *Travels and adventures, 1435-39*, tr. & ed. M. Letts, London (1926), 88.

⁵⁹ Howard PATCH, *The Other World according to Descriptions in Medieval Literature*, Cambridge Mass. (1950), 12-13; the religious allusion is taken from an Anglo-Saxon poem entitled 'De Phoenice', in S. BARING-GOULD, *Curious Myths of the Middle Ages*, London (1892).

⁶⁰ see, for example, Peter LOMBARD, *Sententiarum libri quatuor*, II.17.5, ed. J.P. Migne, in *Patrologia Latina*, vol. 192, Paris (1855), col. 686; Alexander NECKHAM, *De naturis rerum libri duo*, II.49, ed. T. Wright, London (1863), 159; Gervase of TILBURY, *De proprietatibus rerum*, XV.111, Tolosa (1494), fol. 190v.

⁶¹ The standard facsimile and description of the Hereford map is G.R. CRONE, *The World Map by Richard of Haldingham in Hereford Cathedral*, London (1948); the Walsberger map is kept in the Biblioteca Apostolica Vaticana; that of Andrea Bianco in the Biblioteca Nazionale Marciana, MS. Fondo Ant. It. 2. 76.

⁶² Saint ATHANASIUS, *Sancti patris nostri Athanasii. . . opera omnia quae extant. . . Opera & studio monachorum Ordinis S. Benedicti e congregatione Sancti Mauri*, ed. Bernard de Montfaucon, Paris (1698), v. II, 279; MASUDI (Maçourdi), *Les prairies d'or*, trans. by B. de Meynard & P. de Courteille, Paris (1861-77), I, 60. Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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Following Mandeville, the waters of Paradise - after a lengthy stretch underground, again a trope designed to convey to man the impossibility of any endeavour aimed at reaching them - came out at a *fons juventatis*.⁶³ The *fons* itself is still very unworldly - those who live around it 'appear to be perpetually young' (*semblent estre tousiours ieunes*) and never get ill - but the link with spices is very direct, there is no longer any allegory on Trees of Knowledge or Good and Evil, for its water itself smacks of 'all kinds of spices' (*toutes manieres despices*). Similarly, the description of the fountain's whereabouts, if in a place which still goes unnamed, is set in a very real place, for Mandeville himself professes to have drunk three or four times. It is a land where amongst other things 'very good ginger grows' (*croist moult bon gingembre*), a place that for other reasons concords most conveniently with Malabar, named and described contemporaneously in like fashion by Polo.

In Joinville, the chronicler of the Seventh Crusade and of the life of the beatified king Saint Louis, it was the long, and uncertain course of the river Nile, rather than the caprices of the winds or fountains of youth, that link the terrestrial paradise with the provenance of spices and, with a touch of convincing personal flair, the realities of the medieval spice trade. For the Nile, whose eastern arm was considered in the charts of the Catalan tradition to be 'Gion', the great biblical river classically considered and consequently labelled as issuing from paradise (*.. qui descendit de montibus paradisi*), was also known for a historical fact to be the direction from which eastern spice supplies arrived in Cairo:

At the point where the Nile enters Egypt, the people accustomed to such work cast their nets into the river; and, as morning breaks, they find precious commodities carried into the land: ginger, rhubarb, aloe wood and cinnamon. It is said that the spices come from the terrestrial paradise, shaken by the wind from the trees of paradise, just as the dried wood that the wind knocks down in the forest.⁶⁴

Joinville's account heralded a new line of thought that linked oriental spices and the notion of a terrestrial paradise more closely than ever before. By the logic of his account, it sufficed to find the source of the River Nile to unlock both the worldly provenance of spices and the

⁶³ *Mandeville's Travels. Texts and translations*, ed. Malcolm Letts, 2 vols., London (1953), v. II, 326; much the same story appears in Jean d'OUTREMEUSE's *Le Myreur des Histors*, ed. A. Borgnet & S. Bormans, 6 vols, Brussels (1864-87), iii, 58.

⁶⁴ 'A l'endroit où le Nil pénètre en Égypte les gens accoutumés à cette besogne jettent le soir leurs filets déployés dans le fleuve; et, quand le matin arrive, ils y trouvent les denrées précieuses qu'on apporte dans le pays, gingembre, rhubarbe, bois d'aloès et cannelle. On dit que les épices viennent du paradis terrestre, tombant sous le vent des arbres du paradis, comme le bois sec que le vent abat dans la forêt', Jean sire de JOINVILLE. *La vie de St. Louis*, ed. Noel L. Corbett, Quebec (1977). MANDEVILLE, in like fashion, tells us that the Phison or Ganges carried 'maintes pierres precieuses et [lignum aloes et] moult de grauelle dor'. *Mandeville's Travels*.

terrestrial paradise. This seems to have been an idea particularly cherished by Iberian authors, and was probably shared by the rank and file of seamen and soldiers who actively pursued overseas exploration and expansion. It seems, in any case, to have been the motivating scheme underlying Henry the Navigator's brother Prince Pedro's quest for the Garden of Eden across the territories of Prester John, as recorded in popular account. On approaching the River Gihon, the 'River of Paradise', he found linaloan oak (*lignum aloes*) floating down the river towards him. Making his way upstream, Pedro was prevented from reaching the Garden of Eden because his companions refused to cross the mountain ranges which still separated them from it.⁶⁵ The discovery motif of linaloan oak is wholly consistent with the writings of several Iberian authors, Sepúlveda, the Friar responsible for the *Modus faciendi*, the eminent Minorite author on drugs, Fr. Bernardino de Laredo, and Bartolomeu de Granvila, for whom it was not problematic to suggest that the most precious of drugs, *lignum aloes*, came directly from the earthly paradise.⁶⁶

Lignum aloes was not the only God-blessed. For it was precisely in the period that Joinville was writing, the early thirteenth century, that we find recorded through Arab intermediaries the first European arrivals of malagueta, the pungent and aromatic seeds of the tropical West African herbaceous, reed-like plant *Amomum melegueta* Roscoe. These seeds, unknown to the ancients, rapidly infiltrated through Italians a number of European vernaculars as grains of paradise, *Paradieskörner* etc.⁶⁷ But on what basis was this name coined? I do not know of any cosmographical theory by which the seeds were directly accounted for as products of Paradise. According to all quarters, however, the plant's African origins were not appreciated. The English botanist Gerard, writing in 1597, was incapable of reproducing an image of the plant and indeed, as became a commonplace, associated the seeds - colloquially referred to as 'graines' - with *Cardamom Arabum*, Arabic cardamom.⁶⁸ The Portuguese chronicler Barros would cynically have us believe that its market price was largely

⁶⁵ Sergio Buarque de HOLANDA, *Visão do paraíso*, 2nd ed., São Paulo (1969), 153, 208.

⁶⁶ Fr. Bernardino de LAREDO, *Modus faciendi: seu ordine medicandi*, Seville (1527); other authors cited by A.J. Andrade de GOUVEIA, *Garcia d'Orta e Amato Lusitano na Ciência do seu tempo*, Lisboa (1985), 34. There is an image of fishermen scooping *lignum aloes* out of the Nile in the *Secreta Salernitana*, (mid-fourteenth century, Spanish/Provençal provenance), Biblioteca Nazionale, Firenze, MS. Lod. Pal. 586.

⁶⁷ 4º Conde de FICALHO, *Memória sobre a malagueta*, repr. Ag. Geral das Colónias, Lisboa (1955), 21.

⁶⁸ Malagueta was clearly a much confused spice: it was the name Columbus gave to the allspice or pimento he discovered in the New World, see his journal entry for 1 January 1493, in *The Journal of Christopher Columbus*, ed. C. Jane, New York (1989), 132; George GRIFFENHAGEN asserts that the name malagueta was derived from the Molucca Islands, suggesting further confusions, 'The materia medica of Christopher Columbus', *Pharmacy in History*, no. 34, 1992, 134. Halikowski-Smith, Stefan (2001) Portugal and the European spice trade, 1480-1580
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responsible for its epithet - 'for being such a precious spice' (*por ser especearia tam preciosa*) - and its price did indeed remain considerably higher than oriental peppers until the 1450s.⁶⁹ Gerard, moreover, tells us that the seeds were known as grains of paradise chiefly 'in shops'.⁷⁰ We are left wondering, then, how much the marvellous was an offshoot of genuine curiosity and how much the product of a mere commercial sham.

Conclusion: how marvellous was the marvellous?

There tends to be a justification for the marvellous myths communicated to us from the Middle Ages, coherent to their sets of values and on occasion to our own equally. Paradise, as Harry Levin has remarked, is a concept that reflects what is collectively desired by people.⁷¹ If we no longer believe in a terrestrial paradise, having mapped out empirically practically every inch of our globe, to the late medieval mind it was a small jump from Adam's peak 'in the Ocean Sea on the other side of Columbine India' to the mountain of Heaven. They had no reason to disbelieve it - the hypothesis had not been empirically disproved. The colloquial name 'Dragon's blood' ascribed the resin of a shrub from the Far East (*Draecaena cinnabari*, *D. draco*, and *D. ombet*) becomes much easier to understand as such once we look at contemporary mappaemundi and find all sorts of monstrous species placed along the perimeter of the known world.

Rather than living in a blank fear of the unknown, men and women of the Middle Ages actively embraced what they could not understand as the marvellous. Thus the convoluted ritual by which the mandrake was uprooted - by a cord attached to a sacrificial dog whilst a horn was blown to drown out the shriek of the upcoming root - stood in deference to a powerful mind-altering substance that has today been accredited with the properties of an anaesthetic of potent quality, inducing sleep, confused vision, an exaggerated sensitivity to sound, restlessness and hysteria.⁷²

But there is another reciprocal mechanism at work here. There was a deliberate and self-provoked mythicisation of the world. Above and beyond the practical applications found for oriental spices, they were found marvellous virtues appropriate to their market value. Or

⁶⁹ J. de BARROS, *Asia, dos Feitos que os Portugueses Fizeram no Descobrimento e Conquista dos Mares e Terras do Oriente*, dec. I, liv. II, cap. III, Lisbon (1552).

⁷⁰ GERARD, *The Third Booke of the Historie of Plants*, London (1597), Chapter 148, 1358.

⁷¹ Harry LEVIN, *The Myth of the Golden Age in the Renaissance*, Bloomington, Indiana (1969).

⁷² C. L. THOMPSON, *The Mystic Mandrake*, London (1934), first scientifically studied for its physiological effects by Benjamin Ward Richardson in *The Asclepiad*, vol. V, London (1888). DOI: 10.2870/92585

indeed, as Pliny the Elder would have us believe, the tales of ‘fabulous antiquity’ were manufactured specifically to enhance the price of these commodities. Thus it was that the most highly prized products of the Orient, precious stones such as emeralds and sapphires, were worn on rings as a supposed safeguard against the stings of venomous snakes and traps administered by enemies.⁷³

But one needs to be reminded that beyond the empirically verifiable, or the venally stimulated, the bottom line is that there was an underlying popular aesthetic of the marvellous which catered for the wonder and entertainment of its public - as Mandeville declared, ‘many people like to hear of strange things’ - and which, like Don Quixote’s chivalric antics, consciously reproduced itself even when the forward moving spirit of the times must have made it look a trifle ridiculous.⁷⁴

The late Jerry Stannard suggested that Natural History in the Middle Ages was a complex amalgam of fact and fancy, in which reports concerning fabulous and exotic animals were indistinguishable from everyday experiences concerning indigenous species and domesticated varieties.⁷⁵ On the whole, however, we must affirm that by the sixteenth century the vast majority of plants were ascribed far-fetched rather than miraculous properties. These then distinguish those few we must consider wholly fabulous and which had been inherited from classical and early Christian writers, such as the Peridaxion, the *Ligna lapidea* or barnacle goose tree, which were themselves often accompanied with the caution that they stood ‘contrarie vnto mans reason and capacitie’.⁷⁶ Bestiaries and lapidaries - for mineral science was to a much greater degree than that of plants almost wholly dependent upon the chemical revolution - tended to be endowed the pious repositories of miracles from the world of Natural History.⁷⁷

⁷³ Martha BALDWIN, ‘Toads and plague: Amulet therapy in seventeenth century medicine’, *Bulletin of the History of Medicine*, 67, (1993).

⁷⁴ from *Mandeville’s Travels. Texts and translations*, ed. Malcolm Letts, 2 vols., London (1953), as cited by Maria Adelina AMORIM, ‘Viagem e Mirabilia: monstros, espantos e prodígios’, in Fernando CRISTÓVÃO ed. *Condicionantes Culturais da Literatura de Viagens. Estudos e Bibliografias*, Lisbon: Cosmos (1999), 133.

⁷⁵ Jerry STANNARD, ‘Natural History’, in David C. LINDBERG ed., *Science in the Middle Ages*, Chicago (1978), 429.

⁷⁶ citing GERARD, *The Third Booke of the Historie of Plants*, regarding the ‘Stonie wood, or woode made stones’, 1390. The Peridaxion appears with the *Physiologus*, a Christian writing from around 370 A.D. See Chapter 34, ‘Περὶ δέυδρου περιδεξίου’, in F. LAUCHERT, *Geschichte des Physiologus*, Strasbourg (1889).

⁷⁷ Joan EVANS and Mary SERJEANTSON, *English Medieval Lapidaries*, London (1960). For bestiaries, I have consulted Charles CAHIER & Arthur Marie MARTIN, *Nouveaux Mélanges d’archéologie, d’histoire et de littérature sur le moyen âge (Curiosités mystérieuses)*, Paris (1874-77), 4 vols., t. I, 106; t. II, 106; t. III, 207.
Halkowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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Figure 5. Pepper harvesting.



from a miniature of the *Livre des Merveilles*, 14th century, kept in the Bibliothèque Nationale, Paris, ms. Fr. 2810, fo. 84. The illustration is accurate in depicting the pepper plant as a planted stock, much like the vine, even if the detail, such as the support which epiphytes require, is missing. Europeans later explained to themselves the harvesters' attire, a modest loincloth, as a condition of employment, as a measure imposed by the overseers to safeguard against the harvesters appropriating the precious crop, Abbé RAYNAL, *A Philosophical and Political History of the Settlements and Trade of the Europeans in the East and West Indies*, London (1777), I, 72.

My colleague Francesc Relañó, in his study of the medieval cosmography of Africa, has tried to distinguish the legendary from the mythical horizons of Christendom: if the first encompassed 'distant countries of which only indirect or very imperfect information was available', the second was inferred 'aside from reality as a logical corollary underlying the medieval principles of stratified space'.⁷⁸ The provenance of spices must lie somewhere between the two, between the terrestrial paradise and that island in the Ocean Sea beyond Columbine India. If paradise was assumed to be a place no mortal man could enter, neither had Europe during the Middle Ages forgotten the accounts of Antiquity - particularly that of Pliny - or failed to absorb the rumours brought back by medieval travellers and emissaries. So it was that alongside linkages to the unattainable, parallel traditions associated spices with real places such as the 'great island' of Java, and illustrators could attempt realistic drawings of pepper gardens tended by labourers of dark complexion in loincloths (see Figure 5).⁷⁹

8.3. The Functional. Spices in dietetic and therapeutic practice.

That spices were widely attributed marvellous origins implied, through association, that the effects of their ministrations were also considered out of the ordinary, all the more so when concocted in complicated and esoteric compounds. Spices such as ambergris, red coral and powder of pearl were the choice ingredients in the Great Cordial prepared by Raleigh against the endemic threat of poisoning at King James' court; here we have a remedy of marvellous things paraphrasing the magical associations that poison enjoyed with sorcery.⁸⁰ We find this, equally, in the very real search for a universal panacea, also styled as the elixir of immortality or eternal youth. While alchemists increasingly sought such solutions in base metals and minerals, a parallel tradition relied on the repertoire of vegetal spices for such marvellous effects, particularly since Roger Bacon (c. 1220-1292) had suggested that it would be possible experimentally to approximate the elemental qualities of the fruit borne by the

⁷⁸ Francesc RELAÑO, *The Idea of Africa within Myth and Reality. Cosmographic discourse and cartographic science in the late Middle Ages and early Modern Europe*. PhD thesis, European University Institute, Florence (1997), 89.

⁷⁹ Friar JORDANUS, *Mirabilia Descripta* (1929), §13, 30.

⁸⁰ Joseph BLASGRAVE defined sorcery as the use of poison, in counter-distinction to witchcraft. *Blasgrave's Astrological Practice of Physick* (1617), 135; c.f. Ezekiel CHAMBERS' influential *Cyclopaedia: or, an Universal dictionary of arts and sciences* (1728), which defined chiromancy as 'at bottom no other than a fatal poisoning'.
Handbook of Early Modern History (2009), Portugal and the European Spice Trade, 1400-1500
European University Institute

Tree of Life.⁸¹ Arnau de Villanova's elixir of life consisted of dried grapes, liquorice, mirabolans, sugar, lemons, cinnamon, cloves, nutmeg, galangal, aniseed and 'Indian nuts' (coconuts).⁸²

But for the most part fabulous and imaginary ('magiferous') plants, and litanies of marvellous virtues, were conspicuously absent from herbals and medical handbooks. It might be wrong even to equate panaceias such as Villanova's, actively concocted for medicinal ends, with the elixirs of immortality dreamt up from theological scriptures by Patristic writers. Saint Hildegard, for example, the virtuous Benedictine of the twelfth century, also thought spices 'a panacea, on condition of being used moderately. It renders man lascivious and leaves women defenceless'.⁸³ By panacea, what seems to have been understood in this instance is something more akin to a general tonic, whose intake was not to be exaggerated. Fanciful concoctions, then, existed, as we have already seen, but were much more pronounced at the level of compound medicine.

As *simples*, modern pharmacognosy would corroborate many of the medical uses to which spices were put in the early modern world. A lot of course, would transcend the early modern understanding of biological processes. There can be no parallel, for example, to the contemporary knowledge that pimentos are a recognised source of Vitamins C and E and are a high in antioxidants, a valuable tool in the help against cancer. But the fact that pimentos are useful in the chemoprevention of cardio-vascular disorders and cataracts might not have escaped physicians five hundred years ago. It would be a genuinely interesting exercise to examine to what degree sixteenth century pharmaceutical understanding departed from the strictly 'real' and demonstrable in order to gauge the point at which cultural and social interference begins; we shall in a moment investigate the difficulties in speaking of a unified European taste for these very reasons.

But cultural divergences did not prevent the formulation of entirely convincing uses for spices. By the functional, I want to look at how spices were employed in sixteenth century Europe. Not those like indigo, which had a straightforward role in dyeing, or borax in the mechanical arts, but that majority that fall within the sweep of categories we have highlighted as *aromata*, *condimenta* and *species medicinales*. These categories are difficult to disengage

⁸¹ Roger BACON, *Opus Majus*, trans. by Robert Belle Burke, New York: Russell & Russell (1962), 2, 624 ff.

⁸² Arnald di VILLANOVA, *Il libro di Arnaldo di Villanova sul modo di conservare la gioventù e ritardare la vecchiaia*, § 'Elettuario della vita', Genova (1963).

⁸³ 'uma panacea, mas com a condição de ser usado moderadamente. Ele torna os homens lascivos e deixa as mulheres sem defesa'. See Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580 as published by the University of Toronto Press. Also see Jacques BROSSE ed., *A rota das especiarias*, I.N.A.P.A. (Lisbon (1989), 238.

individually, indeed it may make more sense to investigate the links between them. Often there was precious little distinction between what was considered food and medicine; electuaries and confections of powdered spices or syrups could be either medicinals or sweetmeats, just as cordials might be understood to be a liquid refreshment or health tonic. The fifteenth century *Ryght good learning* lists a series of spices ‘from which good sauces and medical electuaries are made’ (*de quoy on fait bonnes sausses et electuaires de medicine*). Equally, food and smell tended to go hand in hand - what appealed to one’s nose, would appeal to one’s mouth and vice versa - while both were roughly subservient to the prescriptions of the inherited pharmacopeia and medical theory generally, from which notions of virtue, and by association well-being, sprang. We can read this, by way of example, in the subtitle of the French edition of Platina’s fifteenth century treatise on cooking, *De honesta voluptate*, which justified its material as ‘tresutile et necessaire pour le corps humain qui traicte de honneste volupté et de toutes viandes et choses que l’omme mange, quelles veztus ont, et en quoy nuysent et proufissent au corps humain, et comment se doyvent apprester. .’. This is equally true of Josse Willich’s *Ars Magirica*, published in Zürich in 1563, which was translated as ‘The art of cooking, of food, of the preparation.. of dishes and drink. A book especially useful to doctors, philologists and all those who wish to maintain health’.

As we can already appreciate, the tenets of classical medicine were not a limited set of mechanical instructions, or ‘plumbing’ as my friend Gonzalo Fernandez de Córdoba would be tempted to describe them, even if generally regarded as the culmination of natural science, but rather a vast array of reflections encroaching upon every sphere of human activity. Medical theory was a holistic question of lifestyle. But to talk of a theory of medicine presents certain difficulties. As a scientific culture, medicine had long been fractured into three competing traditions. There was the scholarly, classical orthodoxy based on Galenic theory, the *métier* of the *physicus* and later the physician, which I have prioritised in my analysis - in part because its printed texts are the most accessible; then there was an older set of traditions of sympathetic, magic and occult therapeutics often in the hands of wise women and quacks that William Eamon has recently brought to light with his work on Books of Secrets in medieval and early modern culture; thirdly, there was a long standing empirical tradition known as the *practica*, which throughout the Middle Ages was in the hands of the *medicus* and in early modern England practising surgeons and barbers, a tradition handed down orally and acquired through practical experience. In the main, this was less concerned with causes of disease and only superficially with symptoms, and more interested in diagnosis and therapeutics; it was, moreover, a tradition which, since Serapio of Alexandria in the

teachings of the scholastics. Arnau de Villanova (ca. 1240-1311), for example, is famous for denouncing the physicians of Paris whom he claimed 'study only for the sake of the university and not in order to obtain knowledge and practical skill'. However, the 'empirick' tradition never worked out an overarching vision of the human body or scheme capable of logical presentation and hence capable of challenging the scholastics on their own ground. Rather, the empirical tradition continued to co-exist, not alongside theory, but underneath it.

The classical philosophy of medicine until the seventeenth century reposed on the Aristotelian system of the four elements - earth, water, air, fire - which together made up the universe. Each of these elements was in turn made up of pairs of qualities (*complexio temperamentum*), earth being cold and dry, water being cold and moist, air being hot and moist, fire being dry and hot. The elements with a quality in common could interchange states. The human body, in line with the classical idea of the parallelism between macrocosm and microcosm, was also subject to the play of these essential qualities, the four elements being represented by the four humours. Hence black bile (*melancholia*) was understood to be cold and wet; yellow bile (*chole*), hot and dry; phlegm (*plegma*), cold and wet; blood (*sanguis*) as hot and wet. There was one problem in the comparison: whilst phlegm, blood and yellow bile were manifestly present in the human body and open to direct observation, black bile remained a purely theoretical entity.

It was the Greek physician Galen, drawing on the humoral theory of Hippocrates, who was largely responsible for setting out the pathological basis of classical medicine. Health and, by contrast, illness depended upon a balance in the humours and their qualities. Man suffered an innate preponderance of one humour, which constituted his nature (*physis*) and was reflected in his temperament, being either melancholic, bilious, choleric or sanguine; illness represented an extreme *dyscrasiae* or imbalance one way or the other, manifest in humoral changes in temperature, consistency, fermentation and putrefaction, and could be diagnosed hot, cold, moist or dry. Now, balance was maintained by the course of your behaviour including personal hygiene, temperance, 'the protection of the body from too much sleep and sleeplessness', control of one's emotional state, and the right employment of movement and rest. Diet, next to behaviour, was pre-eminent and with it, digestion. But imbalance could also be a product of misalignment with the circumstances of the outside world, be it the place, the season, the climate. Each of these was given its own set of influencing qualities: spring was considered hot and wet, summer hot and dry etc. The stages of human life were likened to the seasons with their respective qualities, and each given its own dietary prescriptions and daily routines.

This tradition, what Joseph Ziegler would speak of as 'learned, rational medicine', if never really cast aside, and indeed beginning to win greater social acceptance from 1300, enjoyed a blossoming rebirth in northern Italy from the 1380s with the often elaborately illustrated *Tacuini sanitatis* originally of Arab scholars such as Ibn Botlân, which had been translated by the Salernitan school and reconstituted in the widely divulged *Regimen Sanitatis Salerno*.⁸⁴ In these *Tacuini* the ideal of balancing of health through the regularisation of outward activities was vividly distilled; true to their generic readership, they limited themselves to the establishment of the impact possible courses of behaviour on health as wide ranging as vomiting, to chatting, to sun-bathing and charted the qualities and degrees of a wide range of comestibles together with their utility (*iuuamentum*), their harm (*nocumentum*), the means of negating harmful effects (*remotio*) and a concluding comment (*quid generat*).⁸⁵

Much of the material on how outward courses of behaviour and consumption of specific foods impinged upon health was passed down via the stream of popular almanachs, ditties and calendars that issued during the early modern period, often in verse. The tone was very much prescriptive, and the activities considered often strictly limited. In the case of the 1624 Debrecen Calendar and that of Lőcse from 1626, advice concentrated on blood-letting, cupping, sleeping, sexual intercourse, bathing, gluttony; of the specific foods mentioned, pepper, ginger, salad, honey and vinegar figure.⁸⁶

Medical intervention or 'physicke', when it was required, was most simply performed through the summary expulsion of offending humours from the body by means of blood-letting, cupping, or else through the administration of purgatives - most commonly senna, rhubarb and cassia - provoking stools, vomit or expectoration. Equilibration through inputs was a different issue, because it demanded a theory by which the materials introduced into the body were transmuted into humours. Galenic medical theory responded by suggesting that

⁸⁴ Joseph ZIEGLER, *Medicine and Religion c. 1300*, (Oxford, 1998), 268; Paul Oskar KRISTELLER, 'The School of Salerno: Its Development and Its Contribution to the History of Learning', *Bulletin of the History of Medicine*, 17, (1945), 138-94.

⁸⁵ Published examples of the *Tacuinum* genre are *Tacuinum Sanitatis in Medicina Codex Vindobonensis Series Nova 2644 der Österreichischen Nationalbibliothek* ed. F. Unterkircher, Graz (1967) and Luisa COGLIATI ARANO, *The Medieval Health Handbook: Tacuinum Sanitatis*, translated by Oscar Ratti & Adele Westbrook, London and New York (1976), 6. It begins: 'The secret of the preservation of health, in fact, will be in the proper balance [of all these elements], since it is the disturbance of this balance that causes illnesses which the glorious and most exalted God permits', 6.

⁸⁶ Az 1624-re szóló debreceni kalendárium versei & Az 1626-ra szóló lőcsei kalendárium versei, 'Kalendárium versek', in Tibor KOMLOVSZKI & Béla STOLL eds. *Régi magyar költők tára*, 8, (Budapest, 1976), 43-44. 43-44. Tibor Komlós-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580

every natural entity had its own set of qualities in four different degrees, which were then administered as a carefully constructed remedy, taken either orally as a drug, potion, balsam, pill, or powder, syrup or electuary (preserved in unrefined sugar or honey), or as an anal clyster, or applied to the skin in the shape of greases, oils, waters, ointments, salves, plasters and poultices. Remedies were composed of opposing qualities to the diagnosed condition so to correct the humour imbalance. Thus, for example, at a more prescriptive level, ‘sanguyne and coeryke personnes’ were reminded that ‘it is not good to use peper, for it drieth and brennet blode’, while ‘grene ginger’ was recommended to warm off ‘slymy humors’ in the stomach and aid digestion.⁸⁷ Indeed, spices were typically ascribed the virtues of heat with its accompanying actions, sweating etc. and so were purposefully prescribed in the colder months of the year.⁸⁸ It seems that we can correlate the prevalence of their popular usage with the generalised struggle for the sustention of life; cold, as manifest particularly in the ‘colde sweate’, was considered the harbinger of death.⁸⁹

These qualities were originally set out in Galen’s *De Simplicibus*, composed around 180 A.D., but remained a source of dispute amongst medics, particularly as far as compound medicines were concerned. Gentile da Foligno, for example, questioned why theriac, which was in essence ‘hot’, was used for victims of the plague who were suffering from soaring body temperatures; he more broadly questioned what it was that conferred the heating effect of pepper and the cooling effects of poppy given their outward possession to the touch of the same quality.⁹⁰ Some texts diverged from Galenic prescription in their formulation of the idea of qualities, or ‘vertue naturall that disposeth his spices vnto hete, savour, odour and figure’; the overriding idea was nonetheless that of maintaing balance.

Herbal lore made no great pretensions to what it could achieve. The verses of the Debrecen calendar did not even establish quite what salutary effects they intended to impart on their readers when they suggested, for the month of March, that ‘Ginger, pepper, sage and rue shall not be forbidden to you’ (*Gyömber, bors, sallya es ruta, Nem leszen tüled meg*

⁸⁷ Anthony ASKHAM, *A Little Herball*, London (1561), ‘Piper’; Hieronymus VON BRAUNSCHWEIG, *A Most Excellent Homish Apothecarye*, (1561) and repr. Amsterdam Theatrum Orbis Terrarum (1968), 22.

⁸⁸ for example, the Debrecen calendar’s injunction for the month of January: ‘Etek jo gyömberes, borsos: Ürmös Borr-al-is azonban, Bizvast elhetsz ez holnapban’ (During this month, you can use foods rich with ginger and pepper with confidence as well as spiced wine), ‘Az 1624-re szóló debreceni kalendárium versei’, *Kalendarium versek*, in Tibor KOMLOVSZKI & Béla STOLL eds. *Régi magyar költők tára*, 8, (Budapest, 1976), 433-448.

⁸⁹ BRAUNSCHWEIG, *A Most Excellent Homish Apothecarye*, (1561), 13.

⁹⁰ Da FOLIGNO (de Fulgineo), *Consilia contra Pestilentiam* (1348); idem, *Quaestio de actuione medicinarum* (Perugia, 1339), printed and published with Avicenna’s *Canon* (*Fen quarta primi*), Venice (1503).
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iltva).⁹¹ More often than not the lore limited itself to the induction of states of mind. The litany of one pseudo-Aristotelian Book of Secrets proceeds:

And so shalt thou fynde some spices anoyng, and some helpyng, and some engendren gladnesse, and some love, some hate. Some geven reuerence and honour to the berer, some abiecion and contempt. Some causeth fals dremes, some trew visions. Some gendreth man-hode and strength, some sleuth and febleness. .⁹²

Beyond this, there was an established repertoire of herbs and spices used to allieviate physical afflictions, but it ventured more hesitantly into the pathological realm of disease and epidemic. Timothy Bright admitted quite openly that some diseases, notably cankers and leprosy, were diseases hard to cure by any medicine.⁹³

Part of the problem was that, despite an abundant legacy of detailed and accurate descriptions of clinical symptoms, neither the concept of an etiological agent to disease, nor an understanding of its transmission, of the specificity and general reproducibility of disease, nor host-parasite interaction had been established. Diseases tended to be reduced to a single, observable generic ailment, such as dropsy or 'falling sickness'. Even this often proved hard to identify. Whilst theoreticians argued over the semantic details of 'true plague', 'pestilential contagion', 'pestilential fevers', 'ephemeral plague', 'putrefactive plague', and the like, doctors on the ground tended to find it difficult enough to diagnose epidemic itself.⁹⁴ At the end of the sixteenth century, Parisi complained that 'among modern writers, Ficino lists fifteen symptoms, Fracastorius nineteen, Fernelius thirty, Massa twenty-four symptoms in his introduction and fifty-one in chapter six, Fallopius twenty-nine, Ingrassia fifty-two, Mercurialis twenty-six'.⁹⁵ And the understanding of epidemic, which was thought to be carried by small seeds (*seminaria*) with specific affinities for certain things - organs, or tissues, or for one or other of the humours - had absolutely no relation to what is currently known. Fracastoro, for example, felt that the *seminaria* of smallpox had an affinity not only for blood, as Rhazes had suggested, but more specifically for that trace of menstrual blood

⁹¹ KOMLOVSZKI & STOLL ed., *Régi magyar költők tára*, 435.

⁹² The 'Ashmole' manuscript version of *The booke, of the nature of certayn herbes and stones, and of Aristotle's secrets*, published by Early English Text Society, 67.

⁹³ Timothy BRIGHT, *The Sufficiencie of English Medicines*, (1580), 35-.

⁹⁴ Carlo CIPOLLA, *Fighting the Plague in Seventeenth Century Italy*, The University of Wisconsin Press (1981), 93. He considers, further, the psychological importance of social pressures on physicians, notably the widespread hostility and unpopularity of proclaiming the presence of a dreaded disease.

⁹⁵ PARISI, *Avevimento sopra la peste et le Epiemie*, Palermo, (1593) 5806.

with which each of us was supposed to be tainted *in utero* and which thereafter contaminates our own blood. Following infection by smallpox *seminaria*, the menstrual blood would putrefy, rise to the surface beneath the skin, and force its way out via the smallpox pustules.⁹⁶ This theory existed in a number of variations. Antonius Portus preferred amniotic fluid to menstrual blood.⁹⁷ That the disease almost never recurred in the same patient was widely acknowledged, but this did not evolve into the practicable concept of immunity until the nineteenth century.

Nor is it clear how the illness was determined in terms of qualities and degrees for the sake of appropriate pharmaceutical treatment. One would imagine from the essence of the qualities that a lot of truck was set by moistness of the body and body temperature. But the latter's slight fluctuations can't have been measured with any accuracy, given that the mercury thermometer was only invented by Galileo (1564-1642) and a scale of measure established by G.D. Fahrenheit (1686-1736). Moistness, of course, could have been readily gauged from the quality of phlegm. Similarly, more particular procedures such as examination of the blood or the urine, according to Francesco Cognasso the most important indicator of health and thought to yield information primarily about the condition of the liver, arteries and the bladder, were conducted with great attention but purely from descriptive observation.⁹⁸ These, according to Avicenna, should be analysed in accordance with further Aristotelian categories: substance (degree of purity, admixture of foreign substance), quantity (a great deal, very little or normal), quality (colour, smell), the relationship of different stratifications in the liquid, the place of precipitation (upwards, downwards or in the centre) and the time for sedimentation. But it is not so clear how these indicators were tailored to the conceptual scheme of qualitative imbalance, and beyond that the state of the four humours on which, as we have seen, the functioning of the human body was thought to have been dependent.⁹⁹

What is clear, at least, is that health was not considered to consist in the mechanical perfection of the sum of the parts of the body, a position that, if favoured by Descartes, necessitated a stronger appreciation of human physiology that was only systematically begun

⁹⁶ Girolamo FRACASTORO, *De Contagione et Contagiosis Morbis et Eorum Curatione* (1546), trans. with Latin text by W.C. Wright, New York (1930), 60-63.

⁹⁷ quoted in G. MILLER, *The Adoption of Inoculation for Smallpox in England and France*, Philadelphia (1959), 244.

⁹⁸ Francesco COGNASSO, 'Epidemie, medici ed ospedali', *L'Italia nel Rinascimento*, ch. 4, vol. II, Turin (1966). Thus a herbal such as the *Ortus sanitatis* produced in Mainz (1491) includes a treatise on urine-sampling (*Tractatus der Urinis*) in its final pages.

⁹⁹ Francesco COGNASSO, *L'Italia nel Rinascimento*, Turin (1966), 561-2.
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with Vesalius' ground-breaking work *De Humanis Corporis Fabrica*, published in 1543. Thus, conveniently, it was often not thought enough to administer a single medicine; in any case its efficacy was not that of a specific biological reaction. As diseases had not been specified individually, neither had treatments. A glimpse at the table of 'Vertues' in Parkinson's *Theatrum Botanicum* (1640) is enough to suggest that dozens of plants were listed as suitable treatment for any particular malady. Indeed, the advocacy of a specific drug in treating a specific ill was ordinarily viewed by regular physicians as a symptom of quackery.¹⁰⁰

Many of the factors considered to influence treatment bordered on the inscrutable. Herbals remind us that 'herbes hath influence of certain Sterres and constellations, whereby maye be chosen the best and most lucky tymes and dayes of their ministracion'.¹⁰¹ Nicholas Culpeper listed the various herbs together with the specific planet that governed each.¹⁰² The name of the common virus influenza was taken from the 'influence' of supposedly malefic stars and planets.

Given the speculative nature of pre-modern medicine, much store was set by religious faith as an aid. Thus it is, for example, that in the fresco of the apothecary in the Château d'Issogne ex-votos are on sale hanging from a rail (see Figure 6). In the seventeenth century, Roger Mettam observes, it was normal to send for the priest and the doctor simultaneously, for prayer and the intercession of the saints could be as effective as medicine.¹⁰³ In any case, there is nothing to suggest that patients were any more optimistic regarding their treatment than they are today. Montaigne comments wryly and in great detail on his course of treatment at the Bagni della Villa in Tuscany. When he fell ill in Rome and was prescribed to take 'large quantities of cinnamon followed by Venetian turpentine', he remarks facetiously that he could observe no other effects than a smell of March violets in his urine.¹⁰⁴

Let us investigate a little more closely how the Galenic qualities were attributed to individual spices. Gentilis de Fulgineo, a fourteenth-century commentator on Avicenna, led a series of elaborate *quaestiones* on the subject full of metaphysical terms but in the last

¹⁰⁰ Charles ROSENBERG, *Explaining epidemics and other studies in the history of medicine*, CUP (1992), 14.

¹⁰¹ Anthony ASKHAM, *A Little Herbal*, London (1561), Preface.

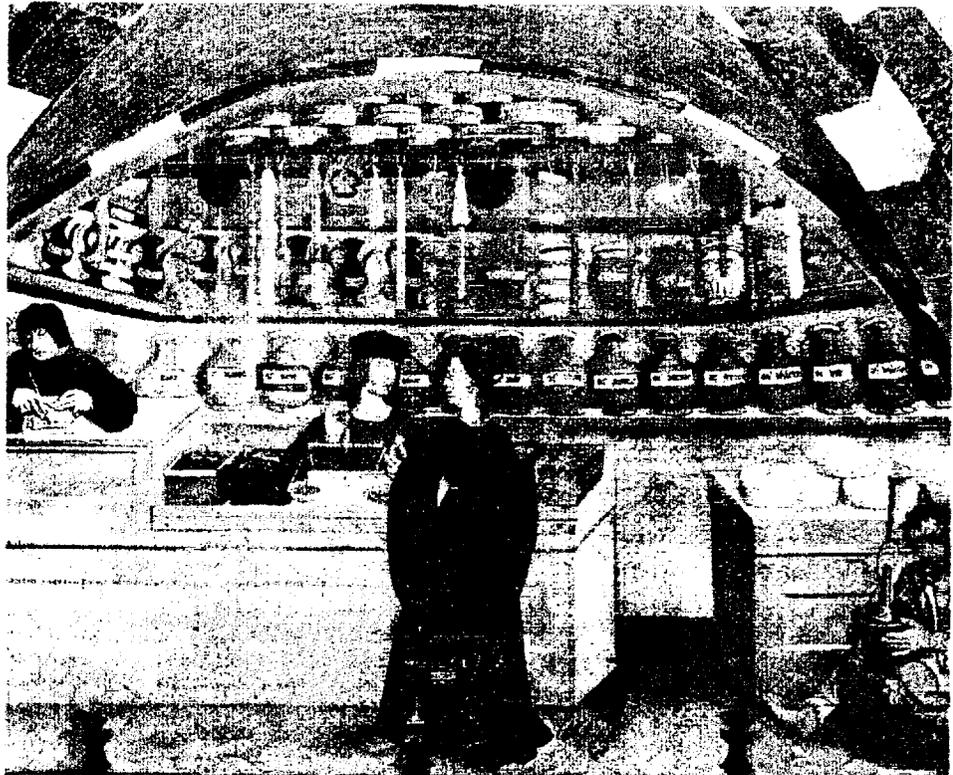
¹⁰² Nicholas CULPEPER, *The English Physician enlarged*, London (1676), index, p. 1.

¹⁰³ Roger METTAM, 'The rise of the surgeon', review of Laurence BROCKLISS & Colin JONES, *The Medical World of Early Modern France*, Oxford (1997), in the *Times Literary Supplement*, October 31, 1997, 17.

¹⁰⁴ Helikowski Smith, Stefan (2001). P. LINKS and the European Spice trade (1980), 158044. European University Institute



Fresco from the Château d'Issogne, Val d'Aosta, end of the 15th century. The liqueous drugs or *materiallia* are kept in glass flasks, corked with hemp, on the first shelf, and in the jugs on the second. Powdered simples were probably kept in the albarello jars also on the second shelf, while *materia medica* and dyestuffs conserved in cakes, like indigo, are kept on the top. On the counter are wooden boxes of items of common consumption, such as dates and other dried fruit, nuts and seeds.



1675
1681
Archivio

MITRIDATIVM

DAMOCRATIS, ER GAL
Cum Insuperato de Excell. Coll. Medicorum Venet. classis.

Rexpe Pulvis Classis
Mylrrha Arabica Tragacathina
Cerei opiani
Agarici thibetici
Zingibari rotundati
Cinnamonis tenuis larynae storacis
Cassiae thibetice
Gummi Olibani
Seminis Thibetici

II
Sedulion Malabaricum
Opobalsamum Libani sicuti Nativum sicuti
Succuba Arab.
Corti adami
Cassiae lachrymae fynciae
Tragacathinae Cypriae
Figuerae longae
Cassiae opiani
Succi Myrrhoribidi
Syringii calanthe
Opoponacis
Pulvis Malabaricus sicuti sicuti
Succi adami, lachrymae

III
Pulvis Malabaricus
Cassiae thibetice
Succi Thibetici
Seminis Daniaci Cereali
Pulvis Balsamici Libani sicuti sicuti
Cypriaceae Dam.
Balsamii opiani

IIII
Nelli Oculi
Gummi Arabici vernicatosi
Seminis Pseudonitii Macedonici
Cory Thibetici
Cordumali sicuti sicuti
Seminis Pseudonitii Cereali
Cassiae Rad.
Radixum rubrorum
Dactylis Cereali

V
Rad. Albi
Sarcinae Arabicae
Succi Glycyrrhizae
Succi sicuti sicuti
Pulvis sicuti
Sagapena fynciae

VI
Meli Achemeniaci Rad.
Sarcinae Oculi
Materiae Scioli sicuti sicuti
Seminis Hippurici
Mella sicuti
Vini Malabarici sicuti sicuti sicuti
Gummi sicuti
Mella, sicuti sicuti sicuti sicuti

39 ANTONIO DE SCOBIS PHARMACOPO
39 sicuti sicuti

THERIACA

ANDROMACHI SENIORIS EX GAL
Cum Insuperato de Excell. Coll. Medicorum Venet. classis.

Rexpe Tinctio Classis
Tragacathinae sicuti sicuti
Tragacathinae de Viperis
Tragacathinae Hedyoti
Figuerae longae
Oryz. Arabici

III
Foliorum Rubrorum rubrorum
Rad. lachrymae Myrrhoribidi
Succi Glycyrrhizae sicuti sicuti
Seminis Daniaci sicuti sicuti sicuti
Seminis Daniaci
Lappaceae Balsamici sicuti sicuti sicuti
Cinnamonis sicuti sicuti sicuti
Agarici thibetici

IV
Mylrrhae Tragacathinae
Corti adami
Cerei opiani
Cassiae thibetice
Nelli Indici sicuti sicuti sicuti
Lachrymae Arabici sicuti sicuti sicuti
Pulvis Malabaricus
Pulvis Daniaci
Materiae Cereali
Materiae Cereali
Albopoponacis sicuti sicuti
Succi sicuti sicuti sicuti
Semi. Pseudonitii Macedonici
Cinnamonis sicuti sicuti sicuti
Lachrymae Arabici sicuti sicuti sicuti
Zingibari sicuti sicuti
Radixum Quinquiflorae sicuti sicuti sicuti

V
Pulvis sicuti sicuti
Cinnamonis sicuti sicuti sicuti
Syringii sicuti sicuti sicuti
Amomi sicuti sicuti sicuti
Meli Achemeniaci
Nelli Indici
Radixum sicuti sicuti sicuti
Cassiae thibetice
Succi sicuti sicuti sicuti
Pulvis sicuti sicuti sicuti
Semi. Pseudonitii Macedonici
Cinnamonis sicuti sicuti sicuti
Lachrymae Arabici sicuti sicuti sicuti
Zingibari sicuti sicuti
Radixum Quinquiflorae sicuti sicuti sicuti

VI
Cassiae thibetice
Succi sicuti sicuti sicuti
Semi. Pseudonitii Macedonici
Cinnamonis sicuti sicuti sicuti
Lachrymae Arabici sicuti sicuti sicuti
Zingibari sicuti sicuti
Radixum Quinquiflorae sicuti sicuti sicuti

39 ANTONIO DE SCOBIS PHARMACOPO
39 sicuti sicuti

Printed announcements publicising the mithridatum and theriac produced at the 'Golden Ostrich' pharmacy (*speziaria*) in Venice in 1675 & 1681, Archivio di Stato di Venezia,



instance, seemed to define the nature and the qualities of the spice according to its appearance and its palpable taste.¹⁰⁵ It seems the degrees were not measured in any systematic way, but merely estimated from personal impression; for this reason, the degrees were open to dispute. Brunfels, for example, considered pepper hot in the fourth degree and dry in the second; ginger, hot in the second degree, moist in the first.¹⁰⁶ It was the nature of phenomena such as ‘hotness’ in pepper that attracted the initial research of Antony van Leeuwenhoek after unveiling the micro-organic realm or the presence of *animalcules* with his discovery of the microscope in 1670, but it was not until the 1820s and ’30s that chemicals and their actions started to be individually identified and the answers to these questions at least in some way answered.¹⁰⁷

The reduction of pharmacological theory to the qualities and degrees of a given substance inevitably led to the questioning of the intrinsic worth of particular spices that were expensive or hard to obtain. The literature on the issue of substitute medicine of similar properties abounded and is important, for it was ultimately from this that a new, domestic pharmacopeia was to emerge. From the earliest known instances, official dispensaries were furnished with lists known as *anteballomena* or *quid pro quo*. Often, the substitutive products were of much the same provenance. Thus, for example, pepper was conventionally substituted by ginger. But as we shall see further on, oriental spices came increasingly to be replaced by simpler and more ‘natural’ prescriptions constituted from locally available herbs, whilst remaining within the bounds of traditional Galenic medical doctrine. Authors wrote systematic tracts specifying parallel medicines, vaunting the ‘pleasantnesse’ and ‘inioymente’ of extracting cures from one’s ‘natieue soyle, and countrie, thy Fielde, thy Orchard, thy Garden’ and the avoidance of ‘the infinite charges rising vpon the vse of straunge and foreigne medicines’.¹⁰⁸ Thus pepper found its equivalent in the sharp, hot seasoning that was cumin, imported in large quantities from Spain but also grown in English herb gardens, and which only cost 2 d. a pound.¹⁰⁹ Other sources indicate that pepper could be replaced by

¹⁰⁵ Gentilis de FULGINEO (da Foligno), *Expositiones Gentilis de Fulgineo in tertium librum Canonis Avicennae*, (1477).

¹⁰⁶ Otto BRUNFELS, *Herbarium vivae eicones: ad nature imitationem, suma cum diligentia et artificio effigiate, una cum effectibus earundem, in gratiam ueteris illius & iamiam renascentis herbariae medicinae* (1530), Appendix, Tomus Primus.

¹⁰⁷ Clifford DOBELS, *Antony van Leeuwenhoek and his ‘Little Animals’* (1958).

¹⁰⁸ Timothy BRIGHT, *The Sufficiencie of English Medicines*, (1580), 1.

¹⁰⁹ cited by T. Hudson TURNER, *Manners and Household Expenses of England in the thirteenth and 15th centuries, illustrated by original records*, London (1841).
 Halikowski Smith, Stefan (2004), *Pepper, London (E&J) European spice trade, 1480-1580*
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juniper berries, ginger for saffron or *pyrèthre* (a plant of the Compositae family), cloves for basil and nutmeg for sage.¹¹⁰ As far as cinnamon was concerned, Dioscorides considered its aromatic properties akin to that of oregano, and Bright rosemary, though it was also substituted by a bark called *erba d'uscian* that Catalan merchants exported from Arzila across the western Mediterranean, and a certain *scorza di Buggiea* traded at Alexandria.¹¹¹

The question, then, that proceeds from this, is that if oriental spices found their match in locally available products, what decided their respective administration. The oldest existing Capitulare degli Speciali, which dates back to 1258, suggests that the principle of substitution was a pragmatic one: 'et si aliquas speties reperire non possum, loco earum specierum alias ponum'.¹¹² It was based upon the pathological theory that medicine was merely 'an aduersarie force of some naturall thing', tailored in nature and degree to oppose that of the offending disease; the prescription was not specific to any particular plant. Indeed, there was enough flexibility in the theory for double quantities of a remedy of a weaker degree to be administered in the event that no remedy of matching degree could be found.

There was nevertheless a greater prestige and weight of learned authority behind the *simples* imported from the Orient, and to those who could afford them, they were the first choice. As the ditty current around the time of John of Salisbury went: 'Pro solis verbis montanis utimur herbis, Pro charis rebus, pigmentis et speciebus' ('If paid in words, we shall use mountain herbs, if we are well recompensed, drugs and spices').¹¹³ Thus it was that if the rich could afford to keep the plague at bay with expensive pomanders, bouquets of aromatic flowers or handkerchiefs sprinkled with perfume, homes could equally be fumigated with incense, juniper, laurel, rosemary, vinegar and gunpowder and, lower down the scale still, the poor would have to content themselves with burning old shoes or keeping a goat.¹¹⁴ It seems, then, there was chiefly a practical reason for the co-existence of these two systems of therapeutic knowledge, hinging upon considerations of cost or else, as Borgarucci pointed

¹¹⁰ Thomas BRIGHT, *The Sufficiencie of English Medicines*, 46.

¹¹¹ Garcia d'ORTA, *Colloquies on the Simples and Drugs of India*, 128; David ABULAFIA, 'I Prodotti Industriali: Il Medioevo', in *Prodotti e Tecniche d'Oltremare delle Economie Europee, secoli XIII-XVIII*, paper given at the XXIX Settimana di Studi, Prato, 14-19 April, 1997, 8, 9.

¹¹² 'and if those spices cannot be found, others will be used in their place', as cited in M. TRINCHIERI DI VENANSON, 'Peregrinazioni e vicende dell' antico capitulare degli speciali del 1258 della Serenissima Repubblica di Venezia', in *Minerva Farmaceutica*, vol. 9, n. 3-4, March-April 1960, 48-51.

¹¹³ Carmélia OPSOMER, 'La Pharmacie du Paradis', in *C.G.E.R.*, 55.

out, the pharmacists' physical lack of the suitable ingredient.¹¹⁵

We might typecast a third body of medicinals, the novelty or wonder drug that had no tradition of scholarly sanction behind it, yet was 'newly discovered' from some uncharted corner of the globe. We could cite a spate of these fresh additions from the New World to the European pharmacopeia: the Jalap root, the chenopod, curare, ipecac, Raleigh's Guiana Balsam or the stone, which, when clenched properly, could make a man piss blood and so relieve his costive sanguine. Often, these new discoveries seized the confidence of the hopeful elites back home, and were aggressively marketed boasting 'wonderfull cures of sundry great diseases'.¹¹⁶ Raleigh was solicited by Queen Anne to treat her son, Prince Henry, despite being condemned by her husband as a traitor. But these exotic substances were often fly-by-night, disappearing as rapidly as they had spectacularly arrived.

We have sketched the pathological framework in which certain diseases (known as 'diseases in the complexion') were diagnosed theoretically as humoral imbalances, to be rectified preferably through outgo or bodily expulsion, but otherwise intake in the form of a counteracting medicine carefully composed in terms of quality and degree. Alongside this, there was undoubtedly an implicit empirical reasoning gauging medicinal virtue to demonstrable therapeutic effect, accompanied by an active process of experimentation with substances both inside and outside the working pharmacopeia and the various forms of preparation (oils, 'waters', plasters etc.). This could be straight-forwardly undertaken as far as the *simples* (singularly administered drugs) were concerned, and indeed we have every indication from a number of manuals in which medicines were classified on the basis of function as well as in terms of primary qualities, and from direct evidence of clinical experiments such as those Francisco Hernández conducted with a number of new drugs in the Royal Hospital for Indians in Mexico City, that there was a rich and lively tradition here. Certain marked and predictable physiological responses could be gauged empirically: for example, as diuretics, analgesics, narcotics, purges, emetics, digestives, sternutatories (substances that provoke sneezing), vermifuges and anti-parasitics; and, not so obviously, as galactagogues (which promote the secretion of milk), sudorifics (which induce sweating), aphrodisiacs, and rubefaciants (which cause redness of the skin). Thus for example, anise was accredited by Gerard as 'being good for them that are shortwinded', which modern medical

¹¹⁵ BORGARUCCI, *La Fabrica degli Speciali...*, Venice (1567), 215-216.

¹¹⁶ see Preface to John Frampton's translation of Nicholas Monardes' *Historia medicinal de las cosas que se traen de nuestra Indias Occidentales, que sirven al uso de medicina...*, as *Joyfull newes out of the newe founde worlde*. In 1577, Febr. London: Constable and Co. (1925).
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physiology would confirm in different terms as 'amplifiant les sécretions et la motilité des flagelles de l'épithélium des voies respiratoires'; just as its recommendation as a combattant against bronchitis was clearly mirrored by Gerard's comment that when taken with honey, it 'clenseth the brest from flegmatike superfluities..[and] doth help the old cough'.¹¹⁷ Modern pharmacy would vouch for many of the beneficial physiological effects common to stimulants and which would concur with their historical application to maladies such as syncope and chronic catarrh, as an antispasmodic and a relief for stomachic and intestinal disorders, and as a remedy for various nervous afflictions. Much more questionable was the prescription of particular spices or drugs for specific diseases, as we have seen, for these, only later to be understood at a micro-organic level, rested on no experimental evidence.¹¹⁸ We are reassured, however, that for the most part, medicinal recipes pertained to ailments of everyday life such as coughing, removing lice, headaches, pain in the stomach, wounds etc. and were not intended for specific diseases. They tended to be geared towards relieving observable symptoms rather than effecting a cure. They were the equivalent of what today is known as patent medicines purchased across counters.¹¹⁹

But it seemed that the empirical tradition came up rapidly against an immutable and scornful academic orthodoxy fostered in institutions such as the English Royal College of Physicians, through which every prospective physician in the realm, excluding graduates of Oxford and Cambridge Universities, themselves bastions of reaction, was obliged to qualify.¹²⁰ It was their discourse, couched between a grounding upon the ancient authorities and theoretical inquiries by way of the *via rationis*, coupled with a scorn towards the empiricks - a physician, for example, was formally meant to diagnose through dialogue with patients and relatives, never touching a client save to feel a pulse with a gloved hand - that led to greater emphasis being placed on the speculative side of medicine as a branch of scholarship, and so dominated the medical texts passed down to us until the great democratising outburst of popular literature enabled by the printing revolution. It was this dichotomy between two different traditions that can help us reconcile Arnau de Villanova's

¹¹⁷ E. COICIU & G. RÁCZ, *Plante medicinale și aromatică*, București (1962), 468-175; GERARD, *The Second Booke of the Historie of Plants*, chap. 397.

¹¹⁸ see Georg STICKER, 'Entwicklungsgeschichte der spezifischen Therapie', *Janus*, 33, (1929), 131-190, 213-34, 245-70.

¹¹⁹ John M. RIDDLE, 'The Introduction and Use of Eastern Drugs in the Early Middle Ages', *Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften*, 49, (1965), 186.

¹²⁰ McNALTY, *The Renaissance and its influence on English medicine, surgery and public health* (1945), Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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outwardly simple, practical and empirical prescriptions with the elaborate theoretical, formal constructions he is famous for and which he published widely in his lifetime.¹²¹

These sophisticated theories sought to rationalise the obtuse compound potions or *compositae* of expensive and difficult to obtain eastern drugs and spices prescribed by a medical profession anxious to retain its authority and field of specialisation from local quack doctors. Scholastic medicine was full of elaborate classical remedies such as *theriac*, trumpeted by Aldrovandi as ‘regale Antidoto degli Antidoti’ and which consisted of sixty four separate ingredients and demanded such lengthy and specialised preparation that specific pharmacies, known as *triacanti*, sprang up in centres of production such as Venice. Variants were manufactured from 57 ingredients, alongside *theriac*’s minor twin *mithridatum*, reputed to have been compounded by Cratelleas, physician to Mithridates, King of Pontus around 80 B.C., and which demanded only half the number of ingredients and was recommended for use in the summer (see Figure 6).¹²² Other common preparations included ‘scioppo di Artemesia’, Hermodactils (‘excellent medicines against al paines in the ioynts’), the Doronicum Romanum and the *diamargariton*, an antidote to the cold, which would appear an arbitrary cocktail of precious drugs on a base of ground pearls, cloves, cinnamon, galanga, aloes, nutmeg, nard, zedoary, styrax, ginger, ivory, musk, cardamom and camphor. While the effects of such a course of treatment seem to have taken second stage, it was the complexity of preparation which saw that it was precisely these potions on which the pharmacist’s reputation or ‘arte’ apparently rested.¹²³

After study, it is often hard to believe that there was any coherent scheme linking these compound concoctions with specific therapeutic or even simply physiological effect, even if it is clear that certain individual spices were associated with certain maladies and that a number of concoctions, such as the diacurcuma or diagalanga, were merely glorified compositions on the base of that individual spice and the understanding of its observed effects. If, in origin, the addition of viper flesh to the *theriac* was considered to provide the

¹²¹ Michael McVAUGH, ‘The *Experimenta* of Arnald of Villanova’, *Journal of Medieval and Renaissance Studies*, 1, (1971), 107-118; more generally, Nancy SIARAI, *Medieval and Early Renaissance Medicine: An Introduction to Knowledge and Practice*, Chicago U.P. (1990), 146.

¹²² J. STANNARD & P. DILG, ‘Observations on De *theriacis et mithridateis commentariolus*’, in *Joachim Camerarius und seine Zeit*, ed. F. Baron, Munich (1977), 152-186. Other *theriac* recipes existed containing fewer ingredients and substituting the most celebrated ingredient, viper’s flesh, for the stag’s horn; the first edition of the London Pharmacopoeia lists three such variants.

¹²³ Richard PALMER, ‘Pharmacy in the Republic of Venice in the sixteenth century’, in A. WEAR, Roger Kenneth FRENCH, & Iain M. LONIE, *The Medical Renaissance of the Sixteenth Century*, Cambridge U.P. (1985), 108. As BRIGHT reminds us: ‘no more is Rhewbarbe, or Scammonie a medicine, than an Oake a Table’, *The Sufficiency of English Medicines*, 8. Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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antidote to poisoning on the basis of *simpatia*, a theoretical foundation of Galenic medicine and ultimately the rationale underpinning the successes of nineteenth century vaccination, it is not clear on what basis theriac's efficacy was then projected, whether as a remedy or preventative, on to 'plague, contagion or occult affliction' (*peste, contagio e mali occulti*).¹²⁴ In this light, Arnau de Villanova's prescriptive metrics appear little more than *ex-post* exercises of theoretical justification, and it is at this theoretical level that we must understand the disputes between Aldrovandi and the Collegio dei Medici in 1574 as to the inclusion or exclusion of costus and amomum in theriac preparation. Modern pharmacology would suggest how difficult it is to predict the effects of anything more elaborate than single-acting drugs such as aspirin. But even the most convoluted of scholastic theories struggled against the naive idealism of concoctions created from the deluded search for a universal remedy or *panacea universale*, proof enough for modern doctors that the profession once represented little more than a triumph of hope over experience. We are tempted to treat Orazio Guarguanti's treatise *Della Theriaca e sue mirabili virtù* (Venice, 1596), a list more than fifteen pages long, including everything from dropsy to epilepsy, melancholy, plague and paralysis to worms and ulcers, as little more than a work of imaginative fiction. He provides us with no justification: he might as well have invoked Gervase of Tilbury's definition of what Jacques Le Goff has cast as the 'scientific marvel', 'that which surpasses our understanding even though it is natural' (*mirabilia vero dicimus quae nostrae cognitioni non subjacent etiam cum sint naturalia*).

In most of these potions, we must conclude, there was no intrinsic medical value in itself, for most of the ingredients were simply inert; few historians would be so hard as McNeill in maintaining that 'it is very doubtful whether the physiological benefits. . . outweighed the harm done by some of the common forms of treatment'.¹²⁵ So, they were esoteric constructions inherited from Late Antiquity that had wedded with the Christian idea of nature as full of miracles and packed with symbolic meanings, and whose salutary effects were in some way equivalent to the market value of the concoction. The psychological effects of treatment must be considered of primary order in this therapeutic system, as gauged with the beginnings of placebo-controlled clinical trials in the 1940s. Intelligent physicians would safeguard their reputation by prescribing such potions for the most general, undemanding and

¹²⁴ note that the classical rationalisation of *simpatia* did not anticipate the development of antibodies, but was based on a general philosophical appreciation that some things are mutually attracting; that, in this case, vipers draw out the poisons in our body 'sicome la calamita tira il ferro a sè, et l' Ambra le festuche di paglia', B.U.B. Aldrovandi 6, vol. II, c. 159 as cited by author of article read in Italian in MSS (FI), 203-4.

often psychosomatic afflictions; thus theriac was passed off in the Vienna Tacuinum as 'primarily good for cold temperaments, for old people in winter in cold regions, and, if necessary, anything else'.¹²⁶ But perhaps the principal point to grasp is that the application of medicine *per se* rested on a different epistemological system, one in which, most broadly speaking, physicians did not confine the role of medical knowledge to its therapeutic function. Medicine was not considered a given concoction guaranteed of a certain effect; the faith we hold in universal and knowable therapeutic effect was simply not present in the pre-modern world. It was a much looser, cautious prescription contingent upon a vast array of uncontrollable external factors. Thus, if 'all medicines stande in a kinde of relation to the disease', the relationship is mediated 'by meanes of the patients age, sex, time of the yeare, custome, and such like occasions greatly varie, no nature always keepeth constant. .'.¹²⁷ If the desired effect did not materialise, doubt was initially cast on the possibility of defective components vitiating the whole - as Galen had indeed himself forewarned - rather than putting the concoction as a whole into question. Herein lies Aldrovandi's obsession with the discovery of 'pure' ingredients on which the success of his theriac was seen to depend. Thus, it seems the pharmacist stood as the initial scapegoat, he who actively prepared rather than conceived ('s'ha da imputare alla mala compositione di essa, fatta per ignoranza, o stracuraggine de' Medici o de gli Speciali'); otherwise, it was the merchant who stood in the firing line, whether for purposeful counterfeiting with 'most filthy concoctions and even mud', ignorance of the substances in question at the time of purchase, or poor provisions for transportation.¹²⁸

It is nevertheless facile to view esotericism as a caprice of the collective imagination, to be explained as an accumulation of 'centuries-worth of superstitious credulity' (*tutta la credulità superstiziosa dei secoli*), or simply dismissed as the 'illogical compounds of mediaeval Europe'.¹²⁹ We cannot simply pass over the great edifices of formal understanding and logic with which compound medical prescription was formulated at the time. Arnau de Villanova, the author of perhaps the most complete corpus of rules for the complexion of a compound medicine, actively derided and insulated his work from what he

¹²⁶ reproduced in *The Medieval Health Handbook: Tacuinum Sanitatis*, f. 53v.

¹²⁷ BRIGHT, *The Sufficiencie of English Medicines*, 8.

¹²⁸ Bartolommeo MARANTA, *Della Theriaca*. ., 8; T. BRIGHT, *The Sufficiencie of English Medicines*, 12-13; preface to *Pharmacopoeia Londinensis of 1618 reproduced in Facsimile*, Madison, Wisconsin (1844).

¹²⁹ F. COGNASSO, *L'Italia nel Rinascimento*, Turin (1966), 612; David L. COWEN & William H. HELFAND, *Pharmacy: An Illustrated History*, New York (1990), 140. Halikowski Smith, Stefan (2001). Portugal and the European spice trade, 1480-1580. European University Institute

considered supernatural concerns - in his biographer's estimation, magical therapies hardly appeared there, and he was hostile to or at least ambivalent about alchemy.¹³⁰

Villanova's work needs to be placed in a long tradition, taking as first principles the Galenic idea of the four degrees (*gradi*) of strength, refined to a set of almost mathematical or, given Stannard's scepticism, pseudo-mathematical rules by Alkindi and Averroes. Here we learn some of the ground rules: that each ingredient was thought to act upon a particular organ, putting the whole project in jeopardy in the event that even one was omitted. By the same score, it was not thought that the various ingredients could neutralise one another through opposing qualities. But even in complex intellectual enterprises such as this with clearly presented assumptions, we rapidly approach the limits of the knowable. We cannot break compounds up into the sum total of constitutive parts. Indeed, the idea that compound drugs gained power through the act of composition, a power greater than the properties of the constituents, a concept expounded by Galen and Avicenna, gained steady ground. This in turn was rooted in the idea that some medicines, whether simple or compound, had particular, individual effects not due to the primary qualities but to a purely idiosyncratic 'specific form'. The most commonly cited example was that of the magnet, whose properties were not susceptible to rational explanation.¹³¹

Positions such as this facilitated arbitrary assertions about the occult powers of supposedly medicinal substances, and only fed the mystical tradition, one much more ancient than classical medicine, and that drew upon ancient sympathetic magic to dwell upon affinity, attractions, senses and agreements between things and elements. This tradition had fused neatly with the Christian doctrine of signatures, whereby God had marked or 'signed' certain things of His creation 'as it were in Hieroglyphics' in ways that indicated their therapeutic values and significance within the course of human events and destinies more broadly. Thus, for example, the brain-like folds of the walnut rendered it a suitable remedy for weak-mindedness, while a 'decoction of the long Mosse that hangs upon Trees', the maidenhair fern, was considered 'good for the bald'.¹³² This tendency came to the fore during the

¹³⁰ M. PEREIVA, 'Arnaldo da Vilanova e l'alchimia. Un'indagine preliminare', *ATIEA*, v.ii, 95-175.

¹³¹ Arnau de VILLANOVA, 'Aphorismi de gradibus' in *Opera medica*, ed. Michael McVaugh (Granada & Barcelona, 1975), vol. 2. See editor's introduction 1-87; Arnald's mathematical principles are analysed on pp. 86-7 & 253-258. A general treatment of the issue can be found in COWEN & HELFAND, *Pharmacy. An illustrated history*, 111.

¹³² Abraham COWLEY (Couleii), *Plantarum libri duo*, London (1662), 245. God's signatures with respect to plants - 'according to their form' - were comprehensively set out in the *Phytognomonica: octo libris contenta: in quibus nova, facillimaque affertur methodus, qua plantarum, animalium, metallorū, rerū deniq[ue] omnīū ex prima extimae faciei inspectione quibus abditas vires assequatur*, Naples (1588), of the sixteenth century Neapolitan naturalist, Giovanni della PORTA. European spice trade, 1480-1580
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seventeenth century when faith invaded every domain of human inquiry.¹³³ ‘This period witnessed the evangelization of herbs and flowers, and the christening of the sacred wood’, Camporesi reminds us.¹³⁴

The mystical tradition flowed equally strongly into the Renaissance philosophical passion for natural magic.¹³⁵ Marsilio Ficino, Cornelius Agrippa and Giordano Bruno all maintained that magical powers resided in certain natural objects that could be manipulated by philosophers who had extraordinary powers of cognition. The task then was to decode the qualities hidden within each object within a coherent and unified scheme subject to Nature. Joachim Camerarius, for example, came up with a dictionary of two hundred symbols.¹³⁶

But Nature’s ‘signs’ must have appeared just as inscrutable as God’s signatures. There were lengthy academic debates as to what part of the plant the signature was written - the flower, seed head, leaves etc. - or, as happened when long-lived plants were recommended for longevity, in some other attribute altogether. Issuing from the ambiguities inherent to such projects were such phenomena as the seventeenth century craze for protective amulets, whereby choice ingredients of the occult pharmacopeia were ground up and fancifully worn in fashionable finger-pieces as an antidote to poisons and epidemics, most typically the bubonic plague.¹³⁷ But the principle on which the prophylactic was meant to work, that the chosen essence of the amulet was thought to be drawn through the pores in the skin, was founded upon a patently faulty understanding of the workings of the body.

Astrology was another favourite domain of occult science. Epidemics, such as the appearance of syphilis in Europe, were commonly explained by the conjunction of malefic planets, most typically Mars, Saturn and Jupiter. This, it was reasoned, had poisoned the upper atmosphere, and the envenomed vapours had entered through the pores into the bodies

¹³³ Robert TURNER, in RAVEN, *English naturalists from Neckham to Ray*, Cambridge, 1947, 234. For texts written in the spirit of the doctrine of signatures, see Gaspar BAUHIN, *De plantiis a divis sanctisve nomen habentibus* (1591) and Bartolomeo AMBROSINI, *Panacea ex herbis quae a Sanctis denominantur concinnata* (1630).

¹³⁴ Piero CAMPORESI, *The Anatomy of the Senses. Natural Symbols in Medieval and Early Modern Italy*, Polity Press (1994), 31.

¹³⁵ see, for example, Osvaldus CROLLIUS, *Tractatus de signaturis internis rerum* (1643). PARACELUSUS’ *Book of Nature* was inspired by the very light (*lumen naturae*) provided by God’s creation.

¹³⁶ Joachim CAMERARIUS, *Symbolarum et emblematum ex re herbaria desunitorum centuria*, Frankfurt: Impensis Iohannis Ammonij, (1661).

¹³⁷ Martha BALDWIN, ‘Toads and Plague: Amulet therapy in Seventeenth century medicine’, *Bulletin of the History of Medicine*, 67 (1993), 227; C. CIPOLLA, *Fighting the Plague in Seventeenth Century Italy*, Madison, WI: University of Wisconsin Press (1981); Hajikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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of men.¹³⁸ Such beliefs had taken firm root through the diffusion of the *Secreta secretorum* of pseudo-Aristotle, which had been passed on through the medium of the Arab *Kitāb sirr al-asrār*, and were confirmed by Roger Bacon and Peter of Abano. From there, they were subsequently enshrined in instruction in many a university medical course.¹³⁹

Occultism, mysticism and natural magic were not esoteric activities on the margins of acceptable scientific inquiry. Learned men such as Robert Boyle, the acclaimed seventeenth century Irish physician and chemist, and a standard bearer of the Scientific Revolution, could legitimately write spurious treatises on the pores and seek to incorporate the putative curative and prophylactic benefits of amulets into their natural and medical philosophies, just as John Wilkins (1614-72), a founding father of the Royal Society and disciple of Francis Bacon, could fantasise about lunar travel and insist that the putative inhabitants of other worlds be redeemed by the same means 'as we are, by the blood of Christ'.¹⁴⁰

The occult tradition, then, fed off its own rich past as well as the lacunae within classical medical theory. A number of the classical authorities, principally Aristotle, developed somewhat ambiguous tenets such as the plant *psyche*, or soul, which only fuelled the shady ground between the two traditions. But the pharmacopeia of the occult, without voicing open hostility to the classical repertoire, diverged significantly. Alessio's medical secrets called for ingredients that would not have appeared in a respectable pharmacy: wild boar's teeth, skin of a dog, dung 'of a blacke Asse'. In fifteenth century Portugal, ailing eyes were treated with egg yolk and white, woman's and bitch's milk, rosemary, lungs of a billy goat, hare or sheep, ashes of human excrement and urine mixed with honey.¹⁴¹ The amulets of the seventeenth century harboured alchemical favourites such as arsenic, quicksilver, orpiment and silver, together with unpleasant oddities such as toads, pearls or spiders.

How can we categorise or account for this alternative pharmacopeia? One can detect a link with many of the ingredients promoted by the breakaway medic of the late thirteenth century Nicholas of Poland, who insisted that 'the more filthy, abominable and common things are, the more they participate' in the blessings conferred by God on nature in the form

¹³⁸ FRACASTORO, *De Contagione et Contagiosis Morbis et Eorum Curatione* (1546), trans. with Latin text by W.C. Wright, New York (1930).

¹³⁹ Charles H. TALBOT, 'Medicine', in *Science in the Middle Ages* ed. D.C. LINDBERG, Univ. of Chicago Press (1978), 414.

¹⁴⁰ Robert BOYLE, *Tentamen porologicum sive ad porositate[m] corporum tum animalium, tum solidorum detegendam*, Londini, (1684).; John WILKINS, *The Discovery of a World in the moone, or, A discourse tending to prove that 'tis probable there may be another habitable world in that planet*, London (1638) and, more generally, P.M. HARMAN, *The Scientific Revolution*, Lancaster (1983).

of marvellous virtues.¹⁴² Although Nicholas came from a starkly different background, one of deep religious conviction, he can be seen to share the occult disdain for the *via rationis* from the position that the efforts by scholastic physicians to exclude the marvellous from medicine was an impossibility, because all true healing agents, since they emanate from God, are miraculous.

What can we conclude? If the accuracy of the diagnosis of symptoms was close to that of today, it has become axiomatic amongst historians of medicine to insist that despite superstition, patently faulty theories and semantic confusion, early modern Europe had inherited a working pharmacopeia that was largely coherent in its populations' eyes, and that medical explanations, whether in the classical or occult tradition, were as consistent with the shared worldview of their patients as our explanations are to us today.¹⁴³

* * * * *

There are a further two functional practices, outside the discourse of Galenic qualities, but widely associated with spices, upon which it might be sagacious to comment.

Spices offered little or no nutritive value, but could preserve flesh. The ancient Egyptians had embalmed with cassia and cinnamon for this reason; other spices, anise, marjoram and cumin were used to rinse out the innards of the worthy dead. In a comparable manner to salt, pepper has been witnessed to kill off food-borne bacteria and fungi and effect enzyme retardation, that is, to slow the putrefaction of meat traditionally slaughtered in November before the onset of winter. This peppered meat was known in German speaking lands as *Konservenfleisch*.¹⁴⁴ Rhine toll accounts bear witness to the trade of barrels of *Neunaugen (pruckei)* a fish preserved separately in vinegar, smoked or in pepper.¹⁴⁵ Recent biological research, however, has shown that other spices might have carried out this role as bacteria killers more effectively still. Garlic, onion, allspice and oregano are considered the best; thyme, cinnamon, tarragon and cumin are reckoned to kill 80% of bacteria, with

¹⁴² William EAMON, *Science and the secrets of nature. Books of Secrets in medieval and early modern culture*, Princeton U.P. (1994), 76-77.

¹⁴³ Edward S. GOLUB, *The Limits of Medicine. How Science shapes our hope for the cure*, (1994); Arthur M. SILVERSTEIN, *A History of Immunology*, (1989), 21.

¹⁴⁴ W. ABEL, 'Wandlungen des Fleischverbrauchs und der Fleischversorgung in Deutschland', *Berichte über Landwirtschaft* (1938), 411-52.

¹⁴⁵ for the court of the Pfalzgraf Friedrich, 'Freifrachtsregister' beginning September 1, 1575, *Das Katzenellenbogener Rheinalterbe* 1479-1584, #218.F.v, VGF, TP, Wiesbaden (1989).
Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1680.
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capsicum chillies and other peppers not far behind. In many ways, the traditional black and white peppers perform rather poorly, killing only 25% of given bacteria, much the same as ginger, aniseed, celery seed and lemon and lime juice.¹⁴⁶ So, we must conclude that practical explanations for the pre-modern consumption of pepper end up rather short.

Not only were spices used as food preservatives; their anti-bacterial properties saw that they were widely used as scented fumigations against malodorous air (*malaria*) or miasma - that is, poisonous vapours, whether generated by rotting matter or emanating from infected persons, animals or objects - and which, until Pasteur and the formulation of the germ theory of disease a hundred years ago, was apportioned the blame for the transmission of pestilence and epidemics that so afflicted those societies.¹⁴⁷ Aromata had been singled out for special attention within Arab medicine; the great physician Abu Zakariya ibn Masawaih wrote a treatise on the five principal aromatics, including two that had gone unnoticed by the ancients - ambergris and camphor - and which were only introduced into Europe thereafter.¹⁴⁸

The quality of air was consequently a source of great importance to medieval physicians. The first instruction in the *Tacuinum Sanitatis* regarding those 'six things which are necessary for anybody in the daily preservation of his health' concerned 'the treatment of the air which touches the heart'.¹⁴⁹ If the only way to stop the spreading of disease was to stop all intercourse with people, animals, and objects coming from areas affected by the plague, the antidote to bad air, as much as one could hope for one, was scent or fragrance, which was understood to act not simply as a mask but as a dispellent, and beyond that, as a therapeutic. Contemporary medical theory suggested that the nose gave direct access to the brain, which regulated the body's spirit or life-force (*vis*). Thus perfumes were frequently prescribed to comfort the brain, the heart and especially the womb. This vital spirit, moreover, was believed to be of a similar constitution to odour, which rendered fragrance a direct

¹⁴⁶ Paul SHARMAN & Jennifer BILLING, in *Quarterly Review of Biology*, reviewed by Nigel HAWKES in *The Times*, March 5, 1998.

¹⁴⁷ In the words of a medieval alchemical poem: 'And when evyl substance shal putrefie/ Horrible odour are gendered therebye/ As of dragons, and men that long dead be/ Their stinke may cause great mortalitie', T. NORTON, *Ordinal of Alchemy*, ed. by J. Reidy, OUP (1975), 64.

¹⁴⁸ Martin LEVEY, 'Ibn Masawaih and his treatise on simple aromatic substances', *Journal of the History of Medicine*, 16, (1961).

regulatory medium.¹⁵⁰

Personal hygiene was doubly reliant on the application of scents as bathing was regarded as suspect, even dangerous, in that it was considered to open up the body's pores, exposing them to unhealthy air and disease. Francis Bacon, Lord Chancellor of England (1561-1626), insisted on being tightly wrapped up in a 'seare-cloth made of Masticke, Myrrh, Pomander and Saffron' for twenty-four hours after he ventured into the tub.¹⁵¹ But generally, washing the face and neck would generally suffice, while hair was rubbed with scented powders and the mouth cleaned by chewing herbs such as aniseed, rinsing with cinnamon or myrrh, or sucking on perfumed candies known as kissing comfits.¹⁵² Aromatic spices, alongside many other products, were used purposefully to scent most of the accoutrements of the everyday world, from clothes to gloves to boxes, even bracelets. Beyond this, 'spice drugs' aromatic qualities were exploited as an ingredient in salves and unguents for flesh wounds, sores and ulcers.

At a public level, spices were burned in the open as a fumigant, for the purposes of purification. Oppressive and stinking air was everywhere, but particularly in large cities - Joachim Du Bellay comments on Paris' stinking muds - and in Venice, whose canals' stench was infamous, 'they have fires both winter and summer, and burn many perfumes, and the people carry with them scents and spices, which are ground in the streets and give forth a most pleasant smell'.¹⁵³ Florence, too, had its streets strewn with 'fragrant herbs' in time of plague.¹⁵⁴ An Italian commentator insists that one could not think of living in Lisbon, without musk, benjoin and amber, which nevertheless were little more than a screen against

¹⁵⁰ E.R. HARVEY, *The Inward Wits: Psychological Theory in the Middle Ages and the Renaissance*, Warburg Institute, London (1978); R. PALMER, 'In Bad Odour: Smell and its Significance in Medicine from Antiquity to the Seventeenth Century', in R. PORTER and W.F. BYNUM eds. *Medicine and the Five Senses*, Cambridge University Press (1993), 61-8.

¹⁵¹ cited in F. MUIR, *An Irreverent and Almost Complete Social History of the Bathroom*, New York (1983), 35.

¹⁵² H. de MONTEUX, *Conservation de santé et prolongation de la vie*, Paris (1572).

¹⁵³ Joachim DU BELLAY, #138 'Ce qui ne me peut plaire, Ce fut l'estonnement du badaud populaire, La presse des cgartiers, les procez, & les fanges', (lines 12-14), *Les Regrets et autres Oeuvres Poétiques*, texte établie par J. Jolliffe, intro. & comm. M.A. Screech, Geneva (1966); and M. de MONTAIGNE, *On Smells*, Penguin 60s, (1995), 31.

¹⁵⁴ C. CIPOLLA, *Faith, Reason, and the Plague: A Tuscan Story of the Seventeenth Century*, Harvester Press (1979), 6; Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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the fetid squalor.¹⁵⁵ The Nuremberg Plague Ordinance (*Pestordnung*) of 1543 went even further in stipulating a special powder (*Räucherpulver*) that was to be burned in every private chamber of the city. We have precise details of its constituents:¹⁵⁶

On a *Storax calamitus* base.

Asafoetida (Ase dulcis)	2 pinches
Lignum aloes	" "
Labdanum	1 pinch
Cloves	" "
Cinnamon	½ pinch
Osaete	" "

Soak in rosewater (madefiant cum aqua rosarum).

Two hundred years later, Defoe could describe attending a church service during a plague outbreak in which 'the whole church was like a smelling-bottle; in one corner it was all perfumes; in another, aromatics, balsamics, and a variety of drugs and herbs; in another, salts and spirits'.¹⁵⁷

Doctors were instructed to wear scented nosegays when treating pestilent patients (see Figure 7) and from the early seventeenth century, doctors in France started to wear a robe made of *toile-cirée*, a fine linen cloth coated with a paste made of wax mixed with some aromatic substances, not so different from Bacon's bath-robe.¹⁵⁸ The sinister costume (see Figure 7) became very popular, especially in Italy, and during the epidemic of 1630-1 it was commonly used not only in large cities such as Bologna, Lucca and Florence, but also in minor Tuscan communities such as Montecarlo, Pescia and Poppi. It seems to have served its purpose relatively well - Father Antero Maria da San Bonaventura suggested unwittingly in 1657 that "the waxed robe in a pesthouse is good only to protect one from the fleas which cannot nest in it" - even if its purported role had been one of preventing miasmatic 'dust' from

¹⁵⁵ 'non ui si potria ui-/uere, et ancor meno se col muschio, col ambra, e col benguino.. non si facasse qualche scher-/mo al gran fetore', 'Ritratto et Riuerso del Regno di Portogallo', in the Niedersächsische Staatsarchiv St. A P 2399, Hannover, and reproduced by A.H. de OLIVEIRA MARQUES, *Portugal Quinhentista*, Chap. 8.

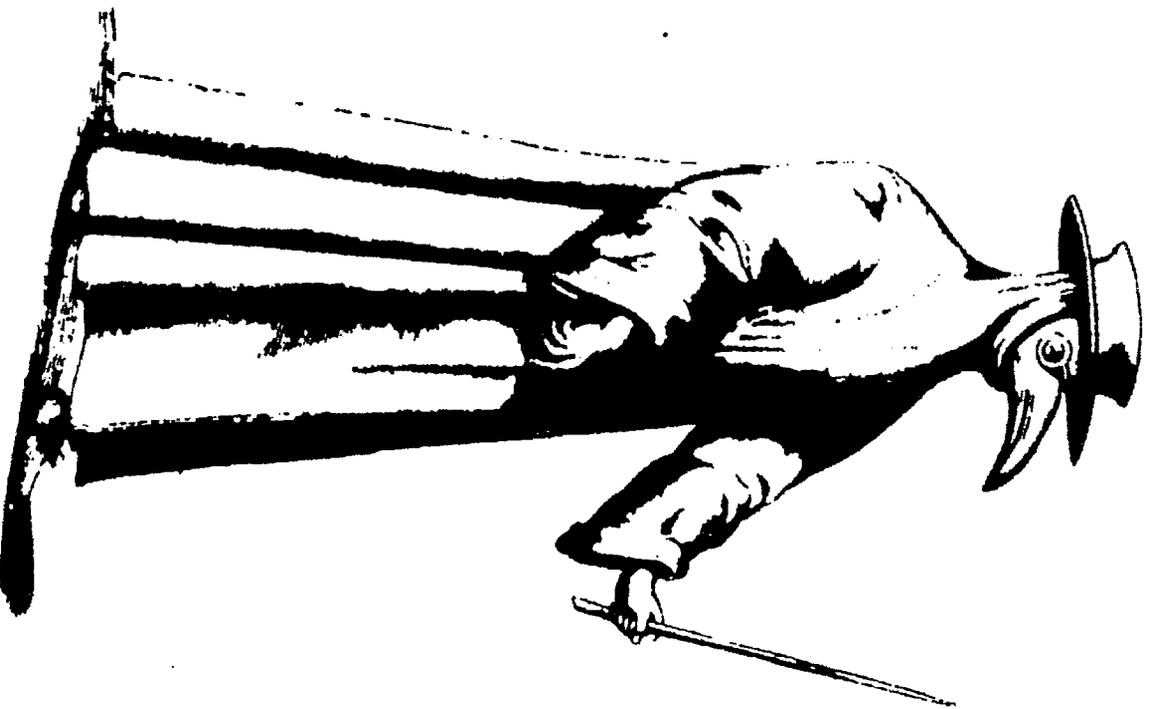
¹⁵⁶ 'Ein kurtz Regiment, wie sich zu Zeiten der Pestilenz zu halten sey; durch die Gelerten und erfarnen der Ertzney doctores gemert und gebessert, anno 1543 zu Nürnberg trucko Johann Petreius adi 18. oktobris', Bayerisches Staatsarchiv Nürnbergs, Rep. 63 I/c - Nürnberger Mandate - Bd. A fol. 75f. Cf. *O Regimento Proveitoso contra a pestenença*, ed. Livraria Civilização, Porto (1962) and *Ordenanças Afonsinas* 1, I, t. LI, §39.

¹⁵⁷ Daniel DEFOE, *A Journal of the Plague Year*, London: ed. J.M. Dent (1928), 239.

¹⁵⁸ see SALZMANN, 'Masques portés par les médecins en temps de peste', *Aesculape*, 22, (1932).
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A doctor's visit to a plague victim, from Johannes de KETHAM's *Fasciculus Medicinae*, Venezia (1500).



The Italian doctor's robe in time of plague. The mask was supposed to act as a filter, being filled with perfumes and alleged disinfectants. The lenses were also supposed to protect the eyes from miasma, from Thomas BARTHOLIN's *Historiarum anatomicarum medicarum rariorum: Centuria.*, Hafniae: Hauboldt. (1654-61).

sticking to the smooth and slippery surface of the robe.¹⁵⁹ Otherwise, more generally, we can attest to the fact that many of the oriental aromatics do possess antiseptic qualities and would, then, have served to hinder the spread of infectious diseases. The sixteenth century world, we must conclude, was a heavily scented one, both fair and foul.

8.4. Taste, or the Aesthetic, and its articulation across European space and the social hierarchy.

By taste, I intend to describe the aesthetic that surrounded the early modern consumption of spices, which as well as an individual's physiological response through the five perceptory senses, is that peculiar form of socio-cultural reproduction on the basis of subjective experiences, judgement and requirements. I shall consequently deconstruct the aesthetic into the sensory, the cultural, which manifests itself in different patterns of taste according to one's coordinates on the European continent, and the social, the articulation of tastes within a given society. I shall concentrate on alimentary taste, for the aesthetic of perfumes and scents seems to have been less apparent in the sources of early modern Europe, at least it didn't possess its own genre of literary expression as the alimentary did the cook-book. Textbooks on sensory perception, furthermore, would suggest that the nose, on the whole, was a less opinionated receptor than the mouth, if closely linked.¹⁶⁰

Historians of food have traditionally suggested that the most startling aspect of late medieval cookery from our perspective is that it was so wildly aromatic and of such strong taste (*saborosa*) - though this says something equally of our bland tastes of today - and that such tastes were both so ubiquitous right across the culinary spectrum and created from such elaborate and eclectic combinations.¹⁶¹ The Renaissance, it is rightly held, represents the golden age of spices in the culinary tradition. Ginger, for example, figures in as many as 70%

¹⁵⁹ cited in CIPOLLA, *Fighting the Plague in 17th Century Italy*, Wisconsin (1981), 12 from ANTERO, *Li Lazaretti della città e riviere di Genova del 1657*, Genova (1658), 518, 27.

¹⁶⁰ Olfaction appears to be the least satisfactory of the five sensory perceptions, with a highly limited and imprecise descriptive vocabulary. D. SUMNER, 'On Testing the Sense of Smell', *The Lancet*, 2, 895-897, (1962); H.L. MEISELMAN & R.S. RIVLIN, *Clinical Measurement of Taste and Smell*, chapter 11, New York (1986). One cannot neglect, however, the close but complex symbiosis between taste and smell: 'taste.. is a special sense closely related to smell.. often, smell plays an important role in the perception of many sensations considered to be tastes', *Encyclopedia Americana* (1975).

¹⁶¹ Madeleine Pelner COSMAN, *Fabulous Feasts, medieval cookery and ceremony*, New York (1976), 'Herbs and Spices', 45. S. Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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of Pidoult's recipes proposed in 1544.¹⁶² Sauces such as cameline, a mix of cinnamon, ginger, cloves, grains of paradise, mace, pepper and bread soaked in vinegar, held sway. But it is not at all clear in what kind of measure the spices were administered to the dishes themselves; the recipe-books list, but do not dose ingredients. Historians like Margaret Wade Labarge have thus turned to household accounts or public provisioning lists to gauge some idea of the quantities administered. She is mightily impressed by the fact that the Sheriff of Sussex was ordered to prepare for the English Queen's journey to France in the spring of 1254 'thirty dozen chickens, thirty dozen fowl, and four thousand of cumin'.¹⁶³ But without a relevant unit of measurement we are none the wiser. Thus, while Schivelbusch - in tune with Labarge - has gone so far as to suggest that 'the dishes literally disappear under the spices; the food is little more than a vehicle for the spices', echoing, perhaps, a more conventional assumption, Cosman would more circumspectly suggest that 'rather than wildly spiced, medieval foods were more likely mildly fragrant'.¹⁶⁴

There is a lot of uncertainty, then, as to how late medieval fare would have tasted. Traditionalists would maintain the predominant tastes to be hot, sharp and tangy (*amaritudine*), due to the acidic element commonly added to sauces (most typically *verjus*, the juice of the unripened grape). This would fairly closely map on to the sensory qualities of spices established by Theophrastus almost two thousand years previously, which he designated hot (*θερμά*), pungent (*δριμεία*), biting (*δηκτικά*), bitter (*πικρά*) and astringent (*στυπτικά*).¹⁶⁵ But while tanginess provided the dominant taste of savoury dishes, sugar and honey too was widely used - particularly for the sick - and was in no contradiction to the salted.¹⁶⁶ Sweets were greatly prized for their sweet and aromatic qualities. Thus it was that Chrétien of Troyes could assure his readers that: 'Nothing there is sharp or sour / Because

¹⁶² L. PLOUVIER, 'Et les épices pimentèrent la cuisine européenne', in *L'Historien*, no. 76, 85.

¹⁶³ Margaret Wade LABARGE, 'The Spice Account', in *History Today*, (1965), vol. XV, no. 1, 34.

¹⁶⁴ Wolfgang SCHIVELBUSCH, *Das Paradies, der Geschmack und die Vernunft. Eine Geschichte der Genussmittel*, Frankfurt (1990), 15 and Theodore ZELDIN, *An Intimate History of Humanity*, 95/6: 'The food of Europe was orientalised by the massive use of spices - it was almost Indian in the Middle Ages'. C.f. COSMAN, *Fabulous Feasts...*, 47. Historiography has tended towards an *a priori* chastisement of the late medieval palate, A.H. de OLIVEIRA MARQUES, for example, talks, as far as the use of spices is concerned, of 'a abusar do seu emprego', *A Sociedade Medieval Portuguesa. Aspectos de Vida Quotidiana*, 2 ed. (1971), 9.

¹⁶⁵ THEOPHRASTUS, *On Odours*, trans. Sir A. Hart, London (1917), 10-.

¹⁶⁶ see, for example, the recipe for 'a great plenty of sugar' to be added to a boiled and pounded chicken in a mould, *Le Menagier de Paris* c. 1393, trans. as *The Goodman of Paris: a treatise on moral and domestic economy*, ed. F. Power, London: Routledge (1928).

the spices there/ Are sweet and smell good'.¹⁶⁷ Powdered sugar was often flavoured with some spice or aromatic flower; the Countess of Leicester bought powdered sugar flavoured with mace, and Bogo de Clare jars of rose and violet sugars.¹⁶⁸ Cyprus achieved great commercial success in processing its home-grown sugars together with imported spices from the neighbouring Levant into sweetmeats, syrups and jams, as did Alexandria, attributed a *zenzeverata da mangiare* by Pegalotti, and 'Barbary', from where came a pot of *succade* presented to Erasmus by the successful Antwerp merchant Erasmus Schetz, an 'exquisite fruit jam, impossible to find in Basel' (*une exquisite confiture de fruits. . introuvable à Bâle*).¹⁶⁹ Similar spiced confitures were presented ceremoniously to French civic judges.¹⁷⁰

Ultimately, however, the sheer range of spices used is one factor that guards against too monolithic an interpretation of late medieval taste. Paul Behaim's expenses book (*Ausgabebüchlein*) kept between 1544-68 records 'saffron, *Zimmetsaffran* (cassia or turmeric?), pepper, ginger, *czimin* (cumin, or a cinnamon variant?), *czimmetorn* (the cylindrical rind of cinnamon), cloves, *zittwer* (ginger?), powdered nutmeg (*mußat plued*), sultanas (*Zibeben*), capers, malagueta, sugar, candied sugar, almonds from Venice and Provence(?) (*pavenzich*), figs, dates, grapes(?) (*weinperlein*)' etc.¹⁷¹

Thus, if spicing meats to some extent alleviated the taste of poorly conserved viands, as Franco Borlandi always maintained, and slowed up their putrefaction, as we have discussed, there nevertheless existed a quite conscious aesthetic that went beyond the dressing up of what to our palate would be a fairly monotonous diet of cooked meats. Spices were, in Teuteberg's classification, hedonistic products, consumed to satisfy desire.¹⁷² We have a printed sermon of Luther in which spices were employed as a paragon of 'deliciousness' -

¹⁶⁷ 'Rien n'i est aigres n'amers / Car les espices qui i sont / Dolces et de boene oldor sont', CHRÉTIEN OF TROYES, *Cligès*, lines 3212-16 ff., in *Les Romans de Chrétien de Troyes*, édites d'après la copie de Guiot (Bibl. nat. II. 794), ed. Alexandre Micha, Paris (1957), vol. II.

¹⁶⁸ in H.T. TURNER, *Manners and Household Expenses of the Thirteenth and Fifteenth Centuries*, London: Roxburghe Club, (1841); M.S. GIUSEPPI, 'The Wardrobe and Household Accounts of Bogo de Clare, 1284-6', *Archaeologia*, LXX (1920).

¹⁶⁹ ERASMUS, Desiderius. 'Epist. 1651' in *Opus Epistolarum Des. Erasmi Roterodami denuo recognitum et auctum per P.S. Allen (et H.M. Allen)*, 12 vols., Oxford: Clarendon Press, (1906-58), t. VI, cited by M. BATAILLON, *Erasme et la Cour de Portugal*, (1927), 8.

¹⁷⁰ see *Le Robert. Dictionnaire de la Langue Française*, 'épices'.

¹⁷¹ Germanisches Nationalmuseum Nürnbergs, Behaim Archiv, Schrank 102, Fach 1/22.

¹⁷² Hans J. TEUTEBERG ed., *European Food History. A Research Review*, Leicester (1992), 5 & Table 1.1 'Social and Psychological Functions of Foodstuffs and Luxuries' and the European spice trade, 1480-1580
European University Institute

he might have been thinking of the spiced honey cake, gingerbread or *pfefferkuchen* that Fynes Moryson was so fond of, and that was widespread across central Europe despite its cost.¹⁷³ Spices, even pepper, were thrown into desserts such as the famous *potage appellé verzuse*, and stewed with fruit into celebrated *confitures*, as we have seen, of sufficient merit to be presented ceremoniously to French civic judges. They were incorporated into all types of drink: hot ales, punches, liquors, mulled wine, hydromel. The ginger beer still consumed in Britain is merely a last relic of this. With many stronger spices, the residual water in which these spices had been soaked was sufficiently flavoursome to substitute the spices themselves in various recipes. But spices were more than condiments, they were eaten in their own right, served up on platters (see Figure 8) laden with pepper grains, cinnamon sticks, crystallised ginger (*gingebras*), perfumed sugar and passed around the dinner table, often as a dessert, a *digestif* or to clean one's breath, and traditionally accompanied by wine.¹⁷⁴

Sources on distribution would immediately suggest that pepper and the 'choleric' spices found a more ready market in the north, and particularly in German and Dutch/Flemish speaking areas; there was clearly a correlation with the more general fact that this is one of the areas of the world where meat is king.¹⁷⁵ That choleric spices flowed to these parts of the world is as demonstrable for the sixteenth century as it is for the present day if we compare the quantities of pepper allocated various regions by the Rott contract in 1577 (see ^{Figure} Graph 1) with the traded imports recorded for 1992 and displayed geographically in Capsule C. Malagueta was certainly less popular in southern Europe, and in Italy and Catalonia was used mainly in recipes adopted from France.¹⁷⁶ In Castile and Portugal it was not used at all.¹⁷⁷

At the same time, it is worth noting that sweets and fine spices were southern predilections. Orta asserted that 'Spaniards do not eat any of the spices except cinnamon' (*Os*

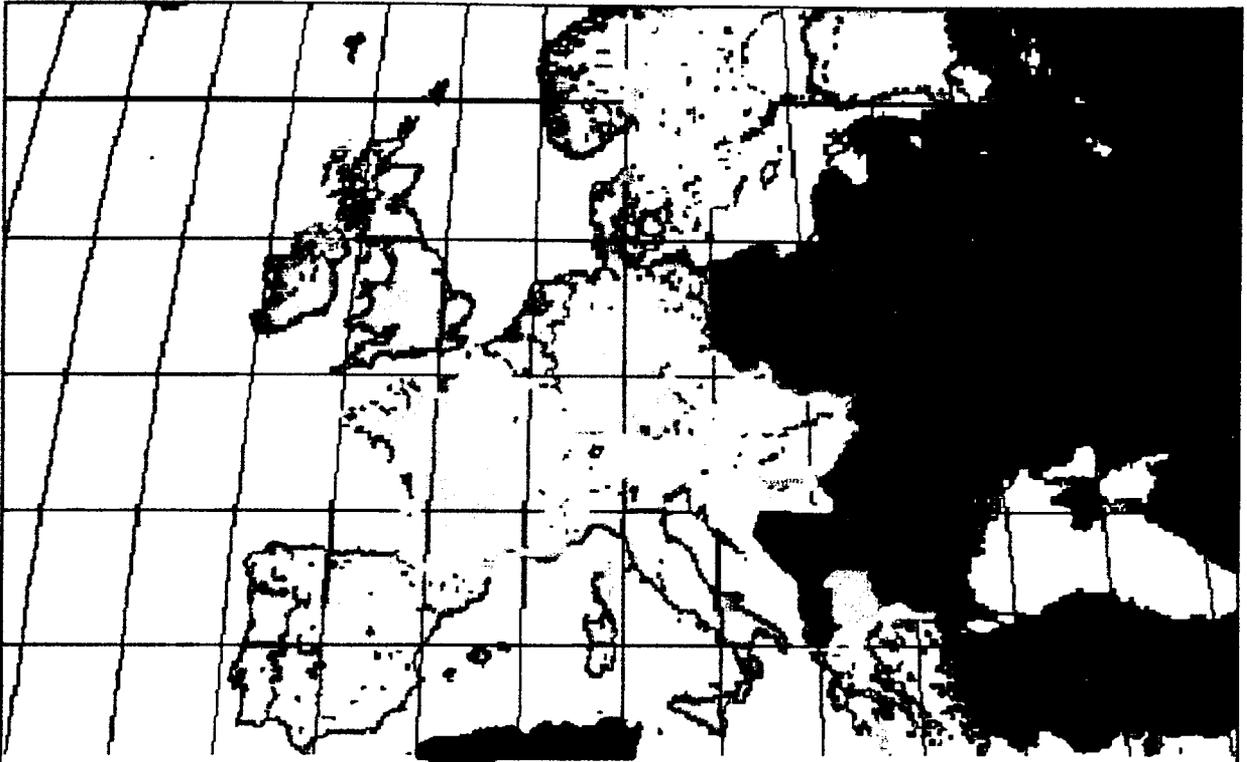
¹⁷³ Luther's Works, (1986), vol. 2, 65.

¹⁷⁴ see, for example, RABELAIS (IV, 14), cited by André GOOSSE, 'Des Mots Épicés', *C.G.E.R.*, 34; also appearing in the *Romance de la Rose*, and in 'le dit du prunier', see Philippe ARIES & George DUBY ed., *Histoire de la vie privée*, Paris: Seuil (1985-7), vol. 2, 326.

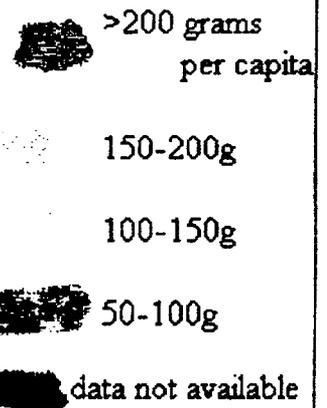
¹⁷⁵ Igor de GARINE, 'Modes alimentaires', in Jean POIRIER ed. *L'Histoire des Moeurs*, Gallimard (1991), vol. I, 1586 ff; for exaazle, TAfoLEVENT, *Le e andierti^H37th*.

¹⁷⁶ I. ELBL, *The Portuguese Trade with West Africa*, 512 citing the *Livro de Sant sovi*, 86-87, 95; Maino DE' MAINERI, 'De Saporibus', in L. THORNDIKE ed. 'A Medieval Sauce-Book', *Speculum* 9, (1934), 188; Maistre CHIQUART, *Du fait de cuisine*, ed. T. Scully fo. 14, 20, 21, 37.

¹⁷⁷ *Tracción española de un manuscrito anonimo del siglo XIII sobre la cocina hispano-maghribi*, ed. A. Huici Miranda, Madrid (1966); *Un libro de cocina del siglo XIV*, ed. J. Osset Meell, Boletín de la Sociedade Castellonense de Cultura, 16, 1935, 156-77; *Um tratado de cozinha do século XVI (ms. 1-E-33 of B.N. of Naples)*, ed. M.J. da Gama Lobo, Salema, dissertation, Fac. de Letras, Univ. de Lisboa (1956).



The European re-distribution of pepper has not changed greatly over the course of the past five hundred years. The economic policies of national autarky have meant that many ex-eastern bloc countries have been starved of 'colonial goods' for some generations, as we can see above. But the centres of pepper consumption remain the same as they were in 1500: the Low Countries, Flanders and Germany, with their immediate umbra: France, Denmark and Austria close behind. Similarly, the countries of the Mediterranean rim continue to demonstrate a certain scorn for the 'black devil', favouring instead, where called for, use of the Spanish pimiento, or chilli pepper.



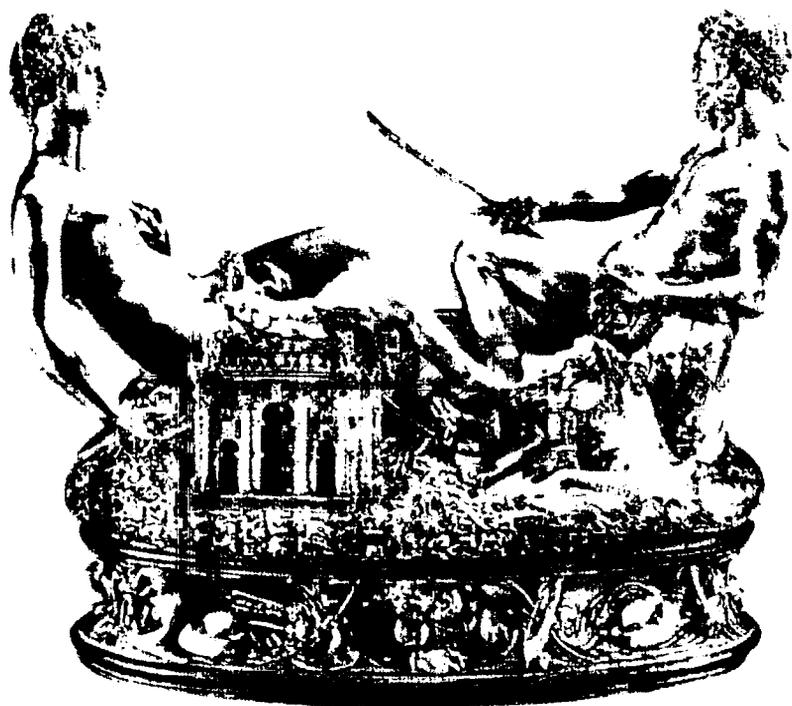
adapted from Table 79, FAO, Trade, Commerce. Statistical Synopsis (1994)

Capsule C. European markets for pepper today, estimated as grams per capita consumption in 1992.





Wooden spice-box, end of the 15th century, Germanisches Nationalmuseum.



Benvenuto CELLINI, *Salt-cellar*, 1543. Chased gold and enamel on ebony base, length 33.5 cm. Kunsthistorisches Museum, Vienna.

Espanões nam comem destas espicerias se nam canela); if this was an exaggeration, Jonathan Israel has nevertheless estimated that around two-thirds of the cinnamon imported by the Dutch into Europe in the mid-seventeenth century was effectively consumed in Spain and her American possessions.¹⁷⁸ Sugar, too, held a very prominent market share in southern and south-eastern Europe as we can see from the instructive market allocations for sugar exports from Madeira contained in the so-called Saragossa decree of 1498: over half was directed into the Mediterranean basin.¹⁷⁹ Rhubarb, like cinnamon, Orta tells us, tended to be consumed in Iberia or else flow to Venice.¹⁸⁰

European taste, then, if it is to be sub-divided, can be understood best in terms of a north/south differential. Il Galateo comments disparagingly on ‘making game of drunkenness’ as but one of ‘many other plagues which have come to us [*sic*] from beyond the Alps’.¹⁸¹ This might be placed alongside Venetian comments unfavourably on Germans huge meals of highly spiced meats, an opinion shared by the Catalan traveller Tafur on his visit to Breslau: ‘they fortify themselves by taking great quantities of food and drink, a custom which to us seems stranger than anything else. I believe that more money is expended upon furs and spices than in half the world besides’.¹⁸² The Poles were widely held to be the most extravagant race of all. Botero, the Italian traveller, described the Polish nobility as ‘very gallant, prodigall in expences, spending more than their revenues in diet and apparell, and the seasoning of their meates (for the Polanders use more spices than any other nation)’.¹⁸³ Góis suggests, as far as the diffusion of tobacco was concerned, that ‘never was so much smoked and with such passion as in Russia and Poland’ (*nunca se fumou tanto e tão apaixonadamente como na Rússia e Polónia*).¹⁸⁴

A dividing line may nevertheless be tentatively drawn in the east between Poland and Muscovite Rus, whose petty nobility was both greatly isolated from the currents of western

¹⁷⁸ Garcia d’ORTA, *Colloquies on the Simples and Drugs of India*, 1, (118); Jonathan ISRAEL, *Dutch Primacy in World Trade, 1585-1740*, Oxford (1990), 251.

¹⁷⁹ details in GAMA BARROS, *História da Administração Publica em Portugal*. ., vol. X, 156.

¹⁸⁰ Garcia da ORTA, *Coloquios*. ed. Ficalho, Lisbon (1895), 275 ff.

¹⁸¹ CASA, Giovanni della (Galateo), *A Treatise of Manners*, Amsterdam: Theatrum Orbis Terrarum (1969), originally published 1576, 100.

¹⁸² extracts from Felix FABRI’s *Evagatorium* (1480-3) and Pero TAFUR, ed. J. de la Espada, *Andanças e Viajes* (Madrid, 1874), in J.G. LINKS, *Travellers in Europe*. ., London (1980), 69 & 57.

¹⁸³ G. BOTERO, *The Travellers Breviat*, trans. London (1601), 82-83.

¹⁸⁴ Danilowski, SOE (18), *Crônicas de D. Manuel, príncipe do Brasil*, 1480-1580

taste - the 'Moscovians' were commonly viewed as a barbarian nation - and largely outside the monetary economy. Thus it was that a report written on the prospects for Dutch trade in the Baltic resignedly confessed that 'they are not at all used to pepper, sugar, wine and such delicacies, and are better off with their garlic, brandy and honey'.¹⁸⁵

The Englishman seems, by contrast, to have been somewhat independent of the matrix traced until now. Whilst heavily reliant on meat, and, from texts such as *Ancient Cookery* (1381) and *Form of Cury* (c. 1390) apparently a connoisseur of some of the lesser known spices such as mace, cubeb, galangal and cinnamon flowers, the German's diet was found to be too sharp and excessive: 'many sauces and commonly sharpe, and such as comfort the stomacke offended with excessive drinking', whilst Sir Robert Dallington could reproach the Italians equally for their 'parsimony and thin feeding', a typical comment from both English and French mouths on what appeared to be an over-consumption of 'herbage'.¹⁸⁶ Igor de Garine has suggested British cooking might be characterised by a less apparent difference between country cooking and that of high society. Largely closed to the influx of southern spices such as the pimento, and unimpressed with the traditional culinary spices still favoured by the Poles, the Englishman sought consolation with his beef and mustard.¹⁸⁷

In conclusion, we can detect from the oppositional discourses of moderation as against excess, of subtle, 'refined' or 'natural' taste as against strong, or harsh taste, the growth of a critique of the use of choleric spices in those culturally determinant countries of Spain, France and Italy. This was to erupt over the seventeenth century, as we shall see in the section on changing market demand, with a distinctly new culture of taste.

The sense of smell, as Febvre has emphasised, played a preponderant role in the

¹⁸⁵ FORSTEN, *Akty i pis'mak istorii baltijskogo vaprosa*, tom 2, Saint Petersburg (1893), 110 and cited by H.-H. NOLTE, 'The Netherlands and Russia in the 17th Century: Economic and Social Relations', *Review of Fernand Braudel Center* (1986), 10 (2): 230-244.

¹⁸⁶ Fynes MORYSON, *An Itinerary; containing his Ten Yeeres Travell through the Twelve domjnions of germany, Bohmerland, Sweitzerland, Netherland, Denmarke, Poland, Italy, Turkey, France, England, Scotland and Ireland*, London (1617), 'The Germans Diet', 81 ff.; DALLINGTON, *Survey of Tuscany*, (1596), 34; more generally, Clare HOWARD, *English travellers of the Renaissance*, New York: Franklin (1968); MONTAIGNE in LINKS, *Travellers in Europe. .*, (1980), 144.

¹⁸⁷ William THOMAS, *The Pilgrim*, (1546); MORYSON's comments on the Polish spiced diet are cited in A. MACZAK, *Viaggi e viaggiatori nell'Europa moderna*, ed. Laterza (1994), 82. Mustard had been given great attention in the kitchen of the English nobleman throughout the Middle Ages, see Margaret WADE LABARGE, *A Baronial Household of the Thirteenth Century* (1965).

perceptual landscape of the ancient and early modern worlds.¹⁸⁸ An attempt to summarise the olfactory prescriptions of the past is depreciated, then, by the gradual atrophy of the sense of smell in the West since the Enlightenment and the corresponding primacy of visual perception in the pursuit of reason and civilisation. Paul Fauré would go so far as to assert that our sense of smell is so underdeveloped in the modern West that we can no more appreciate the importance of odour in the ancient world than the blind can describe a colourful scene.¹⁸⁹ Despite our thorough systematification of the world, our muddled attempts at olfactory classification is poorer than that of most ‘primitive’ tribal cultures extant in the world today, such as the Kapsiki of Cameroon or the Serer Ndut of Senegal.¹⁹⁰

Within these parameters, however, we can gauge some kind of idea as to the olfactory preferences of that age. Sweetness of smell was the principal virtue, just as ‘sharpness’ was of savour.¹⁹¹ Floral fragrances such as rose water, which were largely taken from indigenous flowers given that they did not travel well, were prevalent; behind these, stood a range of stronger scents that had probably not changed significantly since the *Comedies* of Plautus (254-184 B.C) had eulogised myrrh, cinnamon, saffron and cassia. The fruit of cinnamon, for example, when boiled together with some of the coarser pieces of bark, yielded a fragrant oil. Arnau of Villanova otherwise indicates a typical perfume, constituted of an ounce of amber(-gris) mixed with cassia, 3g of lignum aloes, one *scrupolo* of musk, and 16 grains of camphor.¹⁹² But there was also calamus, or sweet flag which, dried and reduced to a powder, often went into a number of the most precious perfumes. There were also other resinous gums and the ‘animal products’ used as fixatives or base fragrances: musk, civet and ambergris.

This descriptive empirical survey of European taste, with all its differences, prompts me to consider once again to what extent taste and smell constitutes a social phenomenon. We have already considered spices as products endowed with the qualities of the marvellous and, as it increasingly became, the exotic. This set the eastern pharmacopeia on a different

¹⁸⁸ Lucien FEBVRE, *Le problème de l'incroyance au XVIe siècle*, (1942), 461-472.

¹⁸⁹ P. FAURÉ, *Parfums et Aromates de l'Antiquité*, Paris: Fayard (1987), 13.

¹⁹⁰ C. CLASSEN et al., *Aroma. The Cultural History of Smell*, Part II ‘Explorations in olfactory difference’, Chapter 3.

¹⁹¹ see, for example, the definition of ‘Od[o]res’ and ‘Od[o]r[i]f[.e]rus’ in Thomas THOMAS, *Dictionarium Linguae Latinae et Anglicanae* (1587).

¹⁹² Arnaldo di VILLANOVA, ‘Del modo di fare un profumo’ in *Il De Conservanda juventute*, Lipsia i.e. Leipzig (1511), in *Libro 2001, modo di conservare la gioventù e ritardare la vecchiaia*, (1963), 52.

demand footing to commonly found European substitutes, although as we shall see, the spirit of rationalism nurturing the Scientific Revolution forced the exotic to assume different forms as the poor record of expensive medical treatment through exotics in Europe made itself ever more evident.

In this next section, I want to look at how spices fitted in to wider social currents of taste, both in their civilising associations and as objects of value, symbols of prestige. For spices, as aromatics both rare and of inherent aesthetic pleasure, had been considered luxuries and thus a corresponding manifestation of high society and civilisation since the age of Sumeric epic legend (c. 3000 B.C.). Erasmus, for example, lists as *luxum ac delicias* those goods whose consumption is confined to the rich - 'cotton, silk, dyed cloth, pepper, spices, ointments, jewels'.¹⁹³

At the same time, value, if represented universally through the price matrix, operates as a mark of social distinction and emulation at all levels, 'an eternal class struggle' in Braudel's words.¹⁹⁴ Now spices, as luxuries, were protected and upheld by the rigorous application of sumptuary laws across Europe during the Middle Ages, which had functioned as consumption regulating devices prescribing which groups could consume which goods in a context where the status system was under strong threat from a major upsurge in the number and availability of commodities.¹⁹⁵ They possessed a strong symbolic value when exchanged or proffered as gifts, often by towns such as Bruges to visiting dignitaries such as the Chancellor of Brittany in 1426, their significance as a prestige good was only underlined.

Their prestige or status value was also articulated through conspicuous consumption, principally quantitative consumption at the table - that great social meeting place - as we learn, for example, from the sumptuous banquets given by the Antwerp factor Manuel Cirne, where he burnt logs of cinnamon instead of plain wood.¹⁹⁶ Spices were also used as fashionable table and clothing accoutrements, where their value was only enhanced through connotation. Many spices were kept and presented in expensive cases. The great Italian Mannerist artist Benvenuto Cellini was commissioned by the King of France in 1543 to produce him a chased gold and enamel salt cellar on an ebony base, which he made into

¹⁹³ ERASMUS, Desiderius. 'Institutio Principis Christiani' (1516), trans. & annotated Neil M. CHESHIRE & Michael J. HEATH, in *Collected Works of Erasmus*, University of Toronto Press, (1974).

¹⁹⁴ Fernand BRAUDEL, *Capitalism and Material Life*, (1974), 123.

¹⁹⁵ Arjun APPARADURAI, introduction to *idem* ed. *The Social Life of Things: commodities in cultural perspective*, Cambridge U.P. (1986).

¹⁹⁶ *Arturo de Magalhães (BASTO) O tempo dos feitores da Flandres: 1530p. no. 2 da Diónyssos, Porto. European University Institute DOI: 10.2870/92585*

metaphoric embodiments of the Earth and the Sea, intertwined and interdependent as much as the salt and pepper contained therein, the one in a finely wrought model ship, the other in a richly decorated temple (see Figure 8).¹⁹⁷ Ambergris was stored in 'golden apples' or sculpted into crucifixes, buttons, rosaries, encrustations in wooden furniture, and even statuettes, while the *pedra bazar*, a sizeable ovoid stomachic concretion of certain herbivores, principally the Himalayan goat, and used against poisons, was entwined by overlapping threads of gold filigree and fixed at one point to a ring designed as an attachment to a piece of clothing (see Figure 9).¹⁹⁸

One can't help thinking that the social and exhibitiv power of certain spices came to replace their acknowledged curative properties, that means an ever looser relationship between social and functional value. This can be seen with the elaborate beaker of 'unicorn' horn made for the Habsburg imperial court at Prague around 1600, which had its origins as a highly considered powdered antidote to poison but came to be fashioned as an exotic curio with the surrounding goldwork greatly surpassing the value of the horn itself (see Figure 9). The decorative value was only enhanced by the addition of a pair of cameos on the lid. With the seventeenth century obsession for fine spices such as nutmeg, silversmiths across Europe went to work on fancy pocket graters and receptacles that chatelaines and travellers could take with them as they moved about (see Figure 9); a new lease of life was given the pomander, a ball of mixed aromatics carried about as preservative against infection, and a fashionable silver accoutrement in seventeenth century England.¹⁹⁹

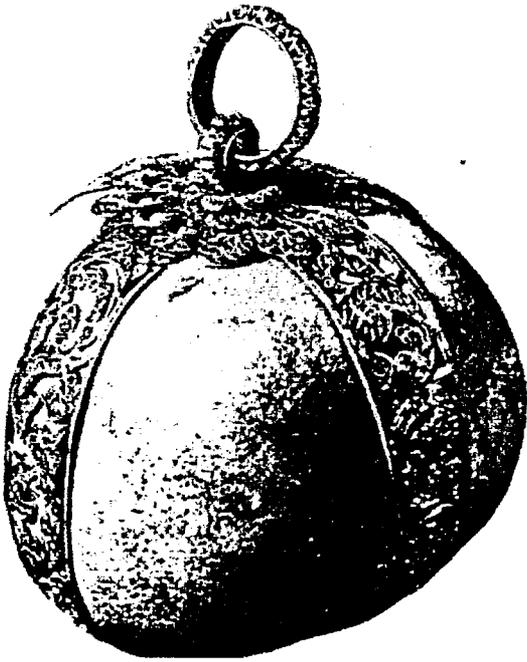
This is not to say spices were solely a publically consumed good susciting exhibitiv, read status value; they appear equally in more intimate milieux, the private sphere, as *épices de chambre*, kept typically in a small box known as an *épicier(-e)*, in the case of Jadwiga Piast (m. 1385) even a jewel-box locked with a key.²⁰⁰ Perhaps the point to make is that spices were distinguished, even in the way they were stored, from other, common domestic

¹⁹⁷ now in the Kunsthistorisches Museum, Vienna. Reproduced in GOMBRICH, *The Story of Art*, Phaedon Press, London (1995), Figure #233.

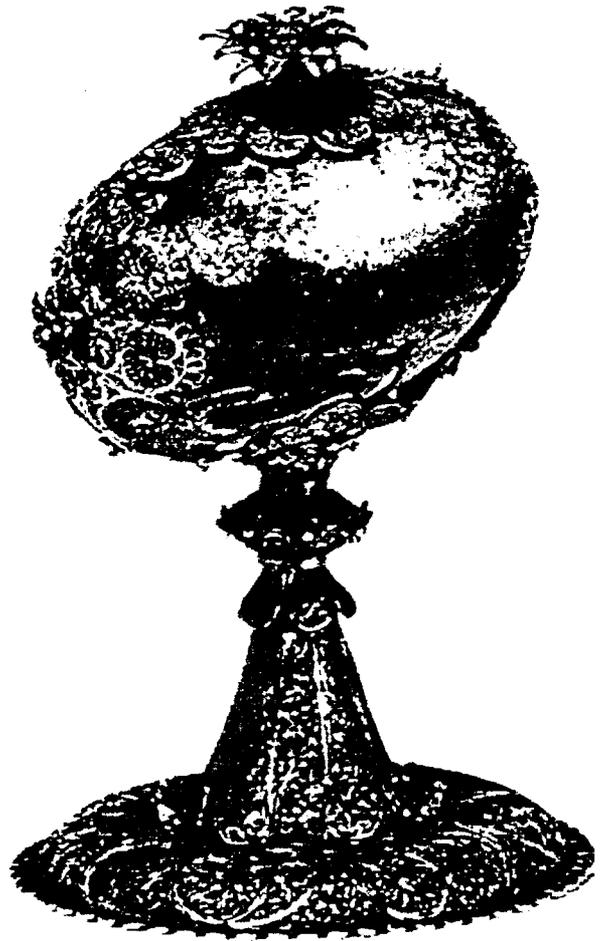
¹⁹⁸ the silver-framed *pedra bazar* from the collection of the Viennese Schatzkammer reproduced in Figure 9 was taken from *Os Descobrimentos Portugueses e a Europa do Renascimento*, catalogue of the XVII Exposição Europeia de Arte, Fundação Gulbenkian, 5 vols. (1983), vol. entitled 'Cumpriu-se o mar', p. 171, #5, 116-7. For a description and history, see A. WEIXLGÄRTNER, 'Die weltliche Schatzkammer in Wien', *Jahrbuch der Kunsthistorischen Sammlungen in Wien*, (1928), 297 ff.

¹⁹⁹ two examples in Joanna BRIERLEY, *Spices: the story of Indonesia's spice trade*, Malaysia: OUP South-East Asia (1994), pp. 23 & 24; and the collection auctioned by Sotheby's in 1966. Otherwise, Philippa GLANVILLE, *Silver in Tudor and Early Stuart England*, London: Victoria and Albert Museum, (1990).

²⁰⁰ Maria Luísa SIMÕES & Henriqueta FERREIRA, *Old Polish Traditions in the Kitchen and at the Table*, 45.



Indian Bezoar stones, decorated in the Indo-Portuguese style of the 17th century. Probably from the stomach of the Himalayan goat or chamois, 90 & 116 mm, Viennese Schatzkammer, (Inventory of 1750) KHM, inv. P. 996 & 1001.



The Viennese Unicorn Beaker (*Einhornbecher*) from the narwhal. Considered as a powerful anti-venom, the horn was fashioned by Jan Vermeven as a drinking vessel and decorated with two Italian cameos. Kunsthistorisches Museum, Vienna.



Nutmeg grater, German c. 1680, panther shell of the Red Sea on a silver mounting, 10 cm length. Private collection.



goods and that in this setting-aside a certain social value was conferred. In noble households, for example, spices were kept in leather pouches together with the furs and robes of the family and, in the case of the royal family, with other valuables of the Royal Wardrobe. In both cases, spices were kept quite separately from the kitchen, and out of reach of potential thieves.²⁰¹

Different spices permeated the social hierarchy to different degrees. Ashtor once estimated that spices entered the social hierarchy of the medieval Levant at the level of the skilled artisan (*les ouvriers spécialisés*), while monastic and hospital records testify to the regular purchases of spices for their members in western Europe.²⁰² Wyczański has held in the Polish case that sugar was reserved for the royal court or rich nobles.²⁰³ Eastern Europe, however, often only partially enjoying the benefits of a monetary economy, needs to be considered a special case; a set of Croatian estate accounts would suggest that only during the course of the sixteenth century were the standard entries of sugar, salt and oil supplemented by pepper, clove (*Klynchaß*) and mace (*Oryskow cwył*), as confirmed by the prescriptions of Zrinski's cookbook.²⁰⁴ But even in the West, emulation was circumscribed to some extent by the limited quantities of these products that reached the European market, at least in the Middle Ages, when the English king's family, ecclesiastics and favoured nobility were accorded pre-emptive rights of purchase.

But by the sixteenth century it would be true to say that the market had opened up considerably, a *Demokratisierung des Luxus* in Weber's famous turn-of-phrase, a concordance with Gabriel Tarde's theory of cultural progress, by which luxury goods cater for the whims of an elite before they become a necessary acquisition of the wider public, seeking respectability.²⁰⁵ The relative abundance of pepper as well as ginger, cinnamon and saffron, all except cinnamon the modest trio at the heart of medieval cooking such as we find in the

²⁰¹ Pamela NIGHTINGALE, *A medieval mercantile community*, (1995), 74.

²⁰² see, for example, those of Kloster Vinnenberg as covered by G. WIEBE, *Zur Geschichte der Preisrevolution des 16. und 17. Jahrhunderts*, Leipzig (1895), 343, while the Hospital of Lier's accounts between 1526-1602 are covered by van der WEE, *The Growth of the Antwerp Market*, vol. I, 533 ff.

²⁰³ E. ASHTOR, 'Essai sur l'alimentation des diverses classes sociales dans l'Orient médiéval', in *Vie Matérielle et Comportements Biologiques*, bulletin no. 16; Andrzej WYCZAŃSKI, 'Les Aspects Sociaux de la Recherche sur la consommation alimentaire à l'époque préstatistique', published with other contributions of the *First International Conference of Economic History, Stockholm*, (1960), 474-.

²⁰⁴ Research on the accounts of a noble family's estates in Vinodol and Ozalj, *Hrvatski državni Arhiv, Zagreb. Arhiv obitelji Sermage, Kutija 44 - 1.1 and ibid, 44 - 1.9, 1.19*, as communicated to me by Natasha Stefanec.

²⁰⁵ Halikowski-Smith, Stefan (2001) Portugal and the European spice trade, 1480-1580
 Max WEBER, *Wirtschaftsgeschichte*, Munich/Leipzig (1923), 156.
 European University Institute

mid-fourteenth century German *Buch von guter Speise*, led to a new phenomenon: their being snubbed by the households of the noblemen for more exotic and expensive spices.²⁰⁶ If we looked at the *Haushaltbuch* of the successful High German merchant Anton Tucher, or consulted the book of expenses of Paul, the nephew of the famous Nuremberg cosmographer Martin Behaim, between 1544-68, we would find that approximately 4-8% of their household expenditure went on spices.²⁰⁷ A sizeable amount; but does this reflect more the quantitative dimension of consumption, or the high cost of purchase? If we extrapolate from the purchasing power of an Antwerp mason's daily summer wage, we can conclude that his salary was equivalent to 105 grams of pepper at market price, and here the difference between their world and our's makes itself felt. For this same sum of money he could afford four and a half kilos of salted beef.²⁰⁸ Or to take another example, a manual worker in Soissons in 1543 would have been able to take home precisely three ounces of ginger after a day at work, that is, less than one hundred grams.²⁰⁹

It nevertheless remains to be asked why spices were left behind in the face of the growth of a mass market of consumption in the critical period of its development between 1500-1750.²¹⁰ Left behind in the sense that the market brought in its train new luxuries such as coffee, chocolate and tea.²¹¹ For what economists have labelled 'the snob effect' is

²⁰⁶ see Liliane PLOUVIER, 'Et les Épices pimentèrent la Cuisine Européenne', in *L'Histoire*, no. 76, mars (1985), 84-85; Pamela NIGHTINGALE, *A medieval mercantile community*, .., 74.

²⁰⁷ W. LOOSE ed., *Anton Tuchers Haushaltbuch*, Tübingen (1877); Paul BEHAIM's book of expenses is in GNMN, Beh. A., Schrank 102, Fach 1/22, and has been analysed by J. KAMANN, 'Aus Nürnberger Haushaltungs- und Rechnungsbüchern des 15. und 16. Jahrhunderts', in *Mitteilungen des Vereins für Geschichte der Stadt Nürnberg*, 6, (1866), 57-122 and 7, (1888), 39-168. By way of comparison, the accounts of the Hospital of Lier between 1526-1602 also reveal that 3-6% of expenses went on sugar and spices, van der WEE, *The Growth of the Antwerp Market*, 533 ff, while the rich Antwerp merchant Gérard Gramaye set aside 6% of his expenses on food for condiments, Raymon VAN UYTVEN, 'Herbes et Épices dans les Villes des Pays-Bas du Sud', in *C.G.E.R.*, (1992), 86.

²⁰⁸ from John H. MUNRO, Table 2, Appendix 1 'The Coinages of Renaissance Europe, ca. 1500', in BRADY, OBERMAN & TRACY eds. *Handbook of European History, 1400-1600*, Leiden: Brill (1994-5). vol. I.

²⁰⁹ from prices cited in MASSON, *Les Compagnies du Corail*, Paris (1908), 196 and Lucien FEBVRE's indications as to the average wage of a manual worker, *Life in Renaissance France*, trans. of *Pour une histoire à part entière*, Harvard (1977), 128, #18.

²¹⁰ the term is that of the Achievement Project entitled 'The English Consumer and the World of Goods, 1500 - c. 1750'.

²¹¹ Tarde's theory is applied by Ralph AUSTEN and Woodruff SMITH, who consider the desire for respectability as the *primum mobile* of expanding consumption of sugar among the poor, 'Private tooth decay as public economic virtue: the slave-sugar triangle, consumerism, and European industrialisation', *Social Science History*, xiv, 1 (1990), 95-115. For the arrival of tea, tobacco, sugar and coffee, see C. STAMMAS, 'Changes in English and Anglo-American consumption 1550-1800', Chapter 9 of J. BREWER & R. PORTER, *The Rise and Fall of the First Consumer Revolution, 1480-1580*, Cambridge University Press (2001). DOI: 10.2870/92585

simply not strong enough to unseat several millenia of collective practice, the unsatisfactory formula that when a rare product arrives within the reach of the masses, its consumption rises sharply, only to fall off conclusively thereafter as it 'loses its attraction'.²¹² For here, the story of paprika in eighteenth and nineteenth century Hungary would suggest that what had been introduced as a cheap palliative for the poor's mealy and repetitive diet rapidly impressed itself on middle-class households for its 'irresistible taste' (*ellenállhatatlan íz*) and soon became a national institution.²¹³

8.5. The Symbolic, and its decline.

This is an extensive and tricky domain of human interpretation and representation concerned with the timeless debate over what constitutes reality. By symbolic, the task is here intended to be that of tracing the history of spices in that domain of religious worship or ritual that served as some sort of transcendental communication with the divine.

In the ancient world, as we have hinted, one of the primary roles of the imported aromatic goods was in public worship or religious ritual. The compound incense of sixteen ingredients called *kuphi* or holy smoke was burned in honour of the ancient Egyptian gods Isis and Osiris, safeguards of the after-life, whose cult spread through the Greco-Roman world.²¹⁴ Rather than performing customary sacrifices of roasted oxen, Pythagoreans burnt images constituted of frankincense and myrrh, as their leader had considered it facilitated metempsychosis, or the transmigration of souls.²¹⁵ Biblical texts such as *Exodus* (22-15) specify the constituents of the holy anointing oil. While certain rites involving spices expired, such as animal sacrifices, others, such as initiation and purification ceremonies, were passed on through the Middle Ages; we might mention the warriors in the *Chanson de Roland*, who ritually prepared themselves for passage into the other world before doing battle by anointing

Consumption and the World of Goods, London: Routledge (1993).

²¹² as Braudel argues under the inspiration of an unaccredited medical historian, *Capitalism and Material Life*, 122; on the snob effect, see LEIBENSTEIN in the *Quarterly Journal of Economics*, 64, (1950), 183-207.

²¹³ caption in an exhibition on paprika, National Agricultural Museum (*Országos Mezőgazdasági Múzeum*), Budapest, November 1998, citing Albert SZENT-GYÖRGYI, *A vitaminok és a paprika*, Budapest. (1934).

²¹⁴ PLUTARCH, *De iside et Osiride*, in *Plutarch's Moralia*, vol. V; London: Heinemann, (1959), § 80 and, more generally, E.G.C.F. ATCHELEY, *History of the Use of Incense in Divine Worship*.

²¹⁵ Marcel DÉTIENNE, *Les Jardins d'Adonis* (Paris, 1972), trans. as *The Gardens of Adonis* (Hassocks, 1972), ch. 4. 'The Spice Ox', *Portugal and the European spice trade, 1480-1580* (Hassocks, 1972), 59. European University Institute

themselves with a mixture of wine and spices, known as *poëvre* in *langue d'oïl*.²¹⁶ Elsewhere, we learn that ginger was a common ingredient for 'magic potions' in the troubadour romances, though here the mediation was perhaps less divine than as an empirical agent of the qualities of an aphrodisiac.²¹⁷

But on the whole, spices' symbolic associations cannot be said to have stretched much beyond certain liturgical rituals and festive requirements by the sixteenth century. Now, if the former amounted to an annual Portuguese return of around 9 quintals of myrrh, and about 33 quintals of frankincense and another incense known by the Portuguese as *encenço macho*, and if it required considerable imagination from Montaigne to affirm that incense in churches was intended 'to make us rejoice, exciting us and purifying us so as to render us more capable of contemplation', spices were still consumed in great quantities on the occasion of particularly important political events.²¹⁸ If once the dead body of Nero's wife Popeia was publically burned on a great pyre of cinnamon, burials had replaced this practice, and it was no longer the case, as in Roman times, that the eagles and military standards were anointed with 'foreign scents', certain ceremonials, such as the coronation of Emperor Henry VI in Rome, continued to demand scented air.²¹⁹

In any case, the European tradition of appropriating nature and its products seems to have been moving towards ritualisation, which may be something like a forgotten or implicit symbolism, rather than the active symbolism we can readily appreciate from totemism and shamanism in West Africa and aboriginal Australia or, more historically, the tea ceremony in China. Here, the *Ch'a shu* ritual was idealised in a great text of Chinese culture, the *Ch'a ching* or *Book of Tea* written by the poet Lu Lu, and which tied tea drinking to Tao symbolism as the 'way to knowledge'.²²⁰ The symbolic interpretations of the patristic writer Raban Maur (780-856), who dedicated a whole chapter of his *De Universo* to comparing the qualities of certain trees and *aromata* to 'the various virtues which adorn the Holy Church' (*les vertus diverses qui ornent la Sainte Église*), is largely an exercise of metaphoric

²¹⁶ Jacques BROSSE, *A rota das especiarias*, (1989), 223 ff.

²¹⁷ see, for example, F. LYONS, 'Vin herbé' et et 'gingembras' dans le roman breton', in *Mélanges... offerts à Jean Frappier*, Genève (1970), 689-96; M. Pastore STOCCHI, 'Altre Annotazioni', §7 in *Studi sul Boccaccio*, v. VII, Firenze: Sansoni (1973), ed. Vittore Branca, 203. That ginger was accorded the properties of an aphrodisiac, see the *Tractatus de gradibus medicinarum* attributed Constantinus Africanus, in YSAAC, *Opera omnia*, Lyon (1515), c. 85 r.

²¹⁸ Michel de MONTAIGNE, *On Smells*, Penguin 60s (1995), 30.

²¹⁹ PLINY, *Historia Naturalis*, vol. IV, bk. XIV.

imagination, were left to one side.²²¹ Keith Thomas has suggested that if vestiges linger on through the early modern period, purely symbolic medicinal prescription such as yellow blossom for jaundice, was on the way out of popular culture.²²² Marc Bloch has famously entertained a thesis tracing the decline over this period of the powers attributed the king's 'royal touch' (*les Rois thaumaturges*). In similar manner, Huizinga has argued for the decline of symbolism, with its servant allegory, in the aesthetics of medieval culture.²²³ Many of the symbols, once ritualised and ever more hollow of meaning, gradually faded from active use. Prescribed ceremonies performed whilst collecting herbs, documented for Anglo-Saxon England, are given no indication in sixteenth century reports within the medical and pharmaceutical professions.²²⁴ If seventeenth century occultism led to a renewed explosion in supernatural phenomena, symbols were sought from new products, minerals and elements, chiefly subterranean, and as yet undiscovered by man, or else astral signs from the impenetrable mysteries of the great firmament.²²⁵ As far as terrestrially growing plants were concerned, ever more the constitutive body of spices, the marvellous, and then in its turn the exotic, seems to have been well on the way to replacing the patently supernatural.

8.6. The Substitutive.

Goods are either consumed or else set aside; the dilemma of *homo oeconomicus* between 'bread today, or jam tomorrow'. But unlike grain, which was re-invested into the soil for tomorrow's yield, spices, which held the virtue of a high degree of self-preservation, took on symbolic value as a substitute currency. This was necessitated by the sheer lack of specie lubricating the pre-Potosian economy of Christendom; Frank Spooner has suggested imaginatively that the entire European patrimony of precious metals could be reduced to a cube of 2 X 3 metres.²²⁶ Spices, and more specifically pepper, by far the most endemic of oriental spices, was not, however, ideal currency, in that its intrinsic value conspired to hoard

²²¹ RABAN MAURO, *De Universo*, liv. XIX, c. vii, in *Patrologia Latina*, ed. by Migne, t. CXI. col. 523-24.

²²² Keith THOMAS, *Religion and the Decline of Magic*, 224-5.

²²³ J. HUIZINGA, *The Waning of the Middle Ages*, Penguin reprint (1990), Chapter 15 'Symbolism in Decline'.

²²⁴ c.f. Wilfrid BONSER, *The medical background of Anglo-Saxon England. A study in history, psychology and folklore*, London (1963), 314-16.

²²⁵ Piero CAMPORESI, *The Anatomy of the Senses*. ., (1994).

²²⁶ Halikowski Smith, Stefan (2001). Portugal and the European spice trade, 1480-1580. *European University Institute*. *L'expansion européenne du XIII au XVème*, Paris (1969).

it rather than circulate, though this was even more true of the precious metals that had not yet been released from such temptations through the introduction of paper money, the true symbolic money.

Margaret Wade Labarge reminds us that a standard land rent for a smallholder in the reign of the English monarch Henry III (1216-72) was a pound of pepper a year.²²⁷ By the sixteenth century, pepper as a substitutive rather than purely symbolic currency was being pushed back by the greatly expanded capabilities of the monetary economy in the light of the influx of precious metals discovered in South America. Spices were no longer the widespread objects of hoarding, and they took ever less the form of particularly important gifts, collective taxes, fines or tribute, as we can find in countless cases from medieval historical records.²²⁸ That is not to say such practices disappeared. The town of Koloszvár regularly presented the Transylvanian princely court in Gyulaféhervár (Alba-Iulia) - indeed as often as three times a year - with gifts of spices and rare fruits during the second half of the sixteenth century.²²⁹ Spices were on occasion a substitutable form of currency even through the early modern period; the King of Portugal frequently overcame shortages in liquidity by making payments in pepper as, for instance, was the case with a series of expensive tapestries commissioned from a renowned firm of Flemish tapestry-makers in the 1530s, and members of his retinue on occasion asked for pepper by way of dispensation (*mêrce*).²³⁰ K.N. Chaudhuri can attest to similar roles of goods as *ersatz* currency for the English East India Company in the early seventeenth century. As late as Racine's *Les Plaideurs*, written in 1668, Dandin the Judge is repeatedly asking for spices by way of remuneration.²³¹

8.7. Between the Stimulant and the Addictive. Spices as *Genußgifte*, or 'poisons of pleasure'?

One can make a case for a category of consumption beyond the aesthetic, that applies to a restricted group of products known, according to one recent German theory, as

²²⁷ Margaret WADE LABARGE, 'The Spice Account', 32.

²²⁸ see, for a few examples, Jacques BROSSE, *A rota das especiarias*, (1989), 224 ff.

²²⁹ municipal accounts, as recorded by the scribe Heltai Gáspár, in 1595, KvSzám 6/XV-XVI, in Emese Bálint, *Transylvanian Spices in 1595*, n.d. Central European University, Budapest. 2000.

²³⁰ see, for example, 'Alvára para se lhe darem dous quintaes de pimenta de mêrce', 30 Abril 1518, A.N.T.T. *Corpo Crónologico*, p. 1, m. 23, d. 43.

Genußgifte, or, quite literally, ‘poisons of pleasure’; for it is a fact that consumption of chocolate, tea, coffee, sugar, tobacco in large quantities - those incidental, luxury products that overlay staple foodstuffs and which we have tried to show, directly inherited the role of traditional spices in European culture - gives rise to desired mind-altering (psycho-active) and other related side-effects (stimulant/depressant), in the first instance interfering with the body’s nervous and circulatory system and detrimental in the long run to one’s overall health.²³² One might be tempted to interpret such consumption as addictive, though according to the strict definition of addiction - ‘that condition induced by a drug which necessitates the continuation of the drug and without which physical and mental derangement result’ - the derangement would be the desired goal rather than the involuntary side-effect of ingestion.²³³ There is much more evidence, however, to speak for the stimulatory properties of spices: Febvre spoke of ‘people who used neither alcohol nor tobacco nor coffee nor tea and who only rarely ate red meat’, who, consequently, ‘got their stimulation from spices, setting themselves aflame with ginger and pepper and nutmeg and carefully concocted mustards’.²³⁴

The principal alkaloids active as *Genußgifte* across the spectrum of luxury comestibles have been recognised as caffeine, isolated by Pelletier in 1822, thein (1827), theobromin (1861) and theophyllin (1888). While regular consumption of over 350mg of caffeine per day has been shown to lead to physical addiction, smaller intakes can lead to hallucination and extra-sensory perception (ASW), along with the less pleasant side-effects such as tremors and convulsions and even paranoid-psychotic projections. Recent research in other quarters has discovered that chocolate contains certain N-Acylethanolamins present in cannabis with a tendency to induce an overall sense of well-being, and a similar sensation is often attributed the consumption of sugar.²³⁵ Similarly, nutmeg and, more recently, parsley, has received attention as a psychotropic and anti-depressant agent whose action arises from the myristicin and elemicin components; the formal relationship of these compounds to the amphetamines

²³² R.K. MÜLLER, O. PROKOP ‘Geschichte der Genußgifte’, in M. AMBERGER-LAHMERMANN & D. SCHMÄHL, *Gifte. Geschichte der Toxicologie*, Heidelberg (1988).

²³³ A. GROLEMAN, *Pharmacology and Therapeutics*, (1951), iv. 97.

²³⁴ Lucien FEBVRE, *Life in Renaissance France*, trans. of *Pour une histoire à part entière*, Harvard (1977), 10.

²³⁵ Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580. European Journal of Nutrition, *Nature*, vol. 382, no. 22, August (1996), 677-78. DOI: 10.2870/92585

(some of which exert hallucinogenic effects) is of current pharmacological interest.²³⁶ Equally, capsicum chillis are being monitored for endorphins, painkillers naturally released by the body to block the sting of the capsaicin which gives chilli their bite.²³⁷

One might have expected the competent contemporary authorities to have intervened, as they did in so many facets of everyday life, had the effects been genuinely harmful to work, social and public life, procreation etc., as they did, for example, in the consumption of hooch (*eau de vie*) beyond its strictly medical applications.²³⁸ Indeed, nutmeg, oil of bitter almonds and even parsley are today in some countries treated as poisonous drugs.²³⁹

But 'poisoning' or even 'pleasure' would not appear to be the most suitable epithets to describe the questionably addictive analgesic (pain relieving) and narcotic (sleep inducing) effects of many of these same plants and spices, particularly when one considers the crude form in which they were taken and the size and frequency of dosage.²⁴⁰ Indeed, Piero Camporesi has gone so far as to talk of a collectively drugged condition or intoxication designed to inure populations to lives of toil, tedium and general hopelessness by means of deliberate adulteration, 'a whole magical pharmacology that induced forgetfulness and serenity, bestowed joviality (*gioivialità*) and cordiality (*cordialità*), and in which spices had their place.²⁴¹

I think Camporesi, in his fascination to unearth the transgressive in past societies, goes too far. On occasions, however, spices, if not addictive, probably can be considered to have imparted both psycho-active and anti-depressant properties or, to quote King Lear on the subject of civet, or musk, 'they sweetened the imagination'.²⁴² But their properties, at least not in Europe, were never socially legitimised and actively harnessed for the collective

²³⁶ G.E. TREASE, *Pharmacognosy*, 12 ed. (1983), § 'On Hallucinogens', 691; 'Be happy, and eat more parsley sauce', *The Times*, Tuesday, April 7, 1998, 14.

²³⁷ 'Hot chile', *The Economist*, December 19, 1998, 88.

²³⁸ D.W.H. SCHWARZ, 'Tranksame und Trinksitten an der Wende vom Mittelalter zur Neuzeit', in D.U. BALL ed. *Kaffee im Spiegel europäischer Trinksitten*, Zürich (1991), 23 f.

²³⁹ cited by MÜLLER & PROKOP, *Geschichte der Genußgifte*, (1988), 255.

²⁴⁰ W. DAEMS, 'Spongia somnifera', *Beiträge zur Geschichte der Pharmazie* 22, no. 4 (1970), 25-6; Theodor HUSEMANN, 'Die Schlafschwämme und andere Methoden der allgemeinen und örtlichen Anästhesie im Mittelalter', *Deutsche Zeitschrift für Chirurgie* 42 (1896), 517-96; Gustav KLEIN, 'Historisches zum Gebrauche des Bilsenkrautextraktes als Narkoticum', *Münchener medizinische Wochenschrift* 22 (28 May, 1907), 1098-99.

²⁴¹ Piero CAMPORESI, *Bread of Dreams: Food and Fantasy in early modern Europe*, trans. by David Gentilcore from *Il pane selvaggio*, University of Chicago, (1989), 19.

inducement of entranced states as the American novelist Paul Bowles has described was the case in North Africa and where drums and benjoin were the rejoinders for mystical experience and enough to provoke the loss of consciousness, or as we see in the woodcuts accompanying Girolamo Benzoni's text on the New World, where medicine men's (*buhuitihu*) prime recourse and social role was the administration of *cohoba*, a strongly narcotic substance, and whose effects we can judge for ourselves from the slumped and inert postures of the recipients.²⁴³

²⁴³ Girolamo BENZONI Milanese, *La Historia del Mondo Nuovo, la qual tratta dell'isole, & mari nuouamente ritrouati, & delle nuoue città da lui proprio vedute, per acqua & per terra in quattordecì anni*, Venezia: Francesco Rampazetto, (1565).

9. THE PROCESS OF DEMYSTIFICATION.

This account has emphasised how important the element of marvel, carried down in a body of myths, had been in sustaining the use of eastern drugs and spices in Europe since early classical times. From the first direct and sustained contacts that the Portuguese developed with their sources of provenance in the Far East, itself a function of the new spirit of enquiry that we call the Renaissance, the marvellous was confronted with the real. I shall trace here a process that we can describe as the demystification of these goods, with the idea that it stands as one of the fundamental factors in explaining the fall of eastern spices from centre stage of European material demands, at any rate a deep-rooted process with considerably more weight than the snipes to the effect that spices were no longer an exciting novelty, or that they fell victim to the denunciations of the growing Puritan movement.¹ Other explanations, such as the suggestion that spices were too income inelastic a consumer good, will be presented as part of the more strictly market-related discussion in Chapter 10.

I perceive three super-imposed levels to this demystificatory process, one which established ultimately that all living matter shared certain properties, which were later reduced to physical laws, as invariable and as mysterious as ever, but testable and quantifiable. I would like to establish the first step as a primarily cosmographical one dealing with the way the world was configured in peoples' minds spatially. It was directly brought about by the Portuguese and successive waves of European explorers, complemented by the large numbers of merchants, soldiers and pilgrims on the move, who helped to discover the world and its geographical parameters.² This information was consequently related to cosmographers back home who mapped it according to a new set of precepts of cartographic representation, one that sought to depict space as a 'free, ideal complex of lines'; we are talking of the homogenization of space rather than the previous scheme whereby place held a formative influence upon the objects' being, and vice versa. The provenance of spices was determined and fitted in to this scheme, and fabulous constructions, such as terrestrial paradise, were gradually dispelled.

The second level was the botanical enterprise of discovering the plants that had grown the fruits, bark, buds, aril, and leaves which constituted spices. A botanical vocabulary

¹ for these, and other explanations, see 'The decline in the vogue for pepper after 1650', F. BRAUDEL, *Capitalism and Material Life*, Fontana (1974), 152-156.

² A.J.R. RUSSELL-WOOD captures this idea in his *A world on the move: the Portuguese in Africa, Asia and America, 1415-1808* Manchester: Carcanet (1992).
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evolved in line with the general tendency that Godinho has ascribed to Portuguese commentators for a 'higher descriptive precision' (*une meilleure précision descriptive*), here in the description of the physical features of each plant, and plates were produced in ever greater detail.³ Finally, the plants were related to each other through different and evolving systems of classification.

The third level of demystification came somewhat later, facilitated by the technological leaps in microscopy. It heralded a bold, new pharmacopeia of chemical agents, couched upon the foundations of cellular pathology, the isolation and duplication of perfume specifics and the accompanying scientific language we have largely retained until today. Bacteria, viruses and the cell as operational units rapidly became the focus of pathological interest; concrete, composite objects such as plants, stones and spices, were rapidly made redundant.

The demystification of the world of spices, as we shall see, was a gradual process that operated at different speeds according to epistemological changes in the domains in which mystique had previously held sway. But in terms of genre, we can see in broad terms how demystification brought down the Books of Marvels only to reformulate them as *Exoticorum libri*, most famously the Clusius edition of 1605, before further approximation was made towards the banalisation of the real. The downfall of the marvellous owes a great debt to the cheapness and facility of the new printing medium, which by one of those momentous historical coincidences mirrored the Discoveries, and through which new information was divulged in line with a rapacious market demand, particularly for travellers' accounts. In the climate of critical awareness towards the intellectual landscape inherited from the learned encyclopedias, the *vivae icones* or 'living landscapes' (to paraphrase Brunfels) of the travel books made a greater impact than they could possibly have done before. Printing established the possibility of a continuous and irrevocable progress of knowledge that had once before, with Pliny, who had derided Herodotus for his tales, petered out.

But there was another, perhaps stronger level, hastening the collapse of the marvellous, which was the physical appreciation and appropriation of spices at first hand - 'le toucher', as Barthes reminds us from his famous essay on the Citroën DX, 'est le plus démystificateur de tous les sens' - and those spices' cultivation for the purposes of botanical study.⁴ We shall consider in a moment the implications for systematic scientific enquiry. Let us rather consider how this possession and domestication ties in to the end of the free-wheeling fantasies of the

³ GODINHO, *Les Découvertes. XVe-XVIe, une révolution des mentalités*, Paris (1990), 43.

⁴ Roland BARTHES, 'La nouvelle Citroën', in *Mythologies*, 656, in *Oeuvres complètes*, Édition Seuil, (1993).
Hajkowsky Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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Figure 10. From the marvellous to the exotic.



The *Naturalienkabinett* of the Nuremberger Apothecary Basilius Besler (1561-1629) as illustrating the frontispiece of his own *Fasciculus Rariorum et Aspectu Dignorum Varii Generis*. ., Frankfurt am Main, (1616).



'Girofle, Bambous, Montagne brulante etc.', Pieter VAN DER AA, *La Galerie agréable du monde, où l'on voit en un grand nombre de cartes très exactes et de belles tailles douces les principaux empires, royaumes, républiques*. ., § Indes Orientales, 2 vol., Leyden (1690), .

marvellous genre and its substitution by the exotic. We can see this in the *Naturalienkabinett* of collectors like the Nürnberg apothecary Basilius Besler (1561-1629), which in inspiration are very much part of the explosion of *Wunderkammer* (literally ‘rooms of wonders’) across central Europe, of which that of Rudolf of Austria is the most famous. The objects of wonder are physically present and tactile, products of Nature; they are no longer marvels recounted in ancient tales, but *rariori* carefully arranged on shelves, suspended from beams or walls, or packed into drawers (see Figure 10). And yet, from their very choice and grotesque manner of exhibition, and the astonished gaze of the beholder, standing on the edge, at the entrance of this curious place, his left hand raised, we are at once connected to that lengthy tradition of the marvellous we have already at length, discussed. Where are the spices, one might protest? Indeed, no longer a catch-all for imported curios, they are those vegetal drugs, most probably tidied away with the ‘lapides’, ‘fructus’ and ‘conchiglia’ we see labelled on the drawers on the right. But they too had their *Wunderkammer*, those carefully illustrated compendia known by such names as *La Galerie agréable du monde*, exotic landscapes packed full of bursting vegetation, the trees and shrubs that furnished the spices long feasted upon in the West (see Figure 10).

I think, too, we can detect the substitution of the marvellous by the exotic in the manner in which the myths of the Ancients are recounted by commentators at a suitable distance from the bookish *compilatores* of the Middle Ages: the tone shifts from being one of banishment and scornful derision to one of incredulity, amused curiosity, such as we find in Raynal’s *Histoire Naturelle Détaillée des Épices*, c. 1770.

9.1. Mediums of demystification.

a) *News dispersal.*

The Discoveries released a torrent of travel literature, whose first-hand, descriptive accounts we must consider amongst the first wave of popular, widely divulged demystificatory literature. Many of these were incorporated into comprehensive cosmographies which, of the great editions of this period, Sebastian Münster’s *Cosmographia* (1544) was translated into five languages and published in 40 different editions. But Münster, like the other influential cosmography from the north, Joannes Boemus’ *Omnium Gentium Mores* (1520), still appear old-fashioned - at least in the little critical discrimination displayed in their choice of constitutive texts - when compared to the three volumes of the *Navigazioni e Viaggi* published by the Venetian civil servant Giovanni Battista Ramusio in 1550, 1556 and 1559, which was

consciously committed to correcting the map of the Ptolemaic tradition, and the many other popular compilations that followed, such as A. Thevet's *Singularitez de la France antarctique, autrement nommée Amerique* (1558). Of individual accounts, it is worth highlighting Ludovico Varthema's *Itinerario* (Rome, 1510), probably the most popular of the Eastern travel accounts, immediately translated into Latin and printed in multiple editions across Europe. Varthema provided more detail than his predecessors on the pepper plant, coco palm, cinnamon and ginger root, brought three kinds of aloes wood into discussion where only two had existed previously, and described the cultivation of nutmegs, mace and cloves on the Molucca and Banda islands.⁵ Varthema had been preceded in small measure by fellow travellers like the Augsburg merchant, Balthasar Sprenger, who visited India in 1505-06 and the anonymous author of the pamphlet entitled *Calcoen* printed at Antwerp in 1504, both of whom had commented at length on the spices to be found along the Malabar coast and their manner of growing.⁶

The Portuguese themselves had meanwhile begun to feel a need for a more thorough survey of the drug traffic and the sources of the spices. Tomé Pires, a pharmacist by training, sent an official letter concerning the spices of the East to King Manuel on 27 January 1510 and again from Malacca around 1515.⁷ But this, and the nearly contemporary account of Duarte Barbosa, in which he includes an appendix entitled 'The divers kinds of spices, where they grow, what they are worth at Calicut, and whither they are carried', were long left unpublished.⁸ Another pharmacist, Simão Alvares, wrote a report in India between 1546 and 1548 on the origins and attributes of the drugs being sent to Portugal at that time; it also remained unpublished.⁹ But even if Portuguese investigations were not being scrutinised by

⁵ The truth behind his travels, however, has been seriously brought into question by O. WARBURG, who scrupulously dissects Vartema's statements about various aspects of the trees and on several counts finds them unreconcilable with the reality, 'Wer ist der Entdecker der Gewürz-Inseln Molukken?', *Verhandlungen der Gesellschaft für Erdkunde zu Berlin*, XXII, (1896), 106-35. Varthema, of course, may not have been particularly gifted at botanic description. In any case, the veracity of his account is not brought up as an important issue by Donald LACH, *Asia in the making of Europe*, vol. I, bk. II, 593 or by L.D. HAMMOND, who has translated and edited the most recent version of his account as *Travelers in Disguise*. ., (Camb., Mass., 1963).

⁶ Balthasar Sprenger's *Indienfahrt, 1505/6*, ed. F. Schulze. (Strassburg, 1902), pp. 54-55; *Calcoen. A Dutch narrative of the second voyage of Vasco da Gama to Calicut printed at Antwerp circa 1504*, intro. & ed. J.P. Berjeau. London, (1874).

⁷ For his list of thirty plants and their botanical names see M. LEMOS, *Historia da medicina em Portugal*. 2 vols. Lisbon (1899), ii, 217-74.

⁸ Barbosa's account circulated clandestinely in manuscript and was published in part by Ramusio in mid-century.

⁹ It was finally published by Jaime WALTER in 'Simão Alvares e o seu rol das drogas da India', *Studia*, Halkowski, Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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a wider public, they are at least indicative of an active interest in the plant world they had discovered; the preliminary version of what was probably António Galvão's now lost *História das Molucas* dedicates an entire chapter to 'The Most Useful Trees of these Islands'.¹⁰

The active botanists of Europe, to be distinguished from the rote compilers of herbals, closely followed travellers' accounts and whatever second-hand reports they heard or read, rapidly elevating their authors to authorities on an equal par with the ancients.¹¹ This was never more important than during the first half of the sixteenth century, before clippings, cuttings and dried plant specimens started circulating widely and, at the same time, before a new generation of botanists, physicians like Willem Quackelbeen of Courtrai, or Leonhardt Rauwolff of Augsburg, was actively travelling to those distant parts of the world to accumulate direct experience and report back on it. In its turn, travel gradually disassociated botanists from reliance on the traveller's word which, in the case of Ludovico V(B)artheta, have been brought into doubt by its patent descriptive inaccuracies.¹² By the time we reach Gerard, we find the author restraining himself from deepening his description of the balsam tree, protesting that 'otherwise by report to set downe certaine matter by incertainties, would discredite the author'.¹³

b) *Critical study of the classic texts.*

Empirical work on plants was promoted by a Renaissance revival and critical reworking of ancient texts. The technological leap engendered by mechanical printing saw to a great diffusion, initially of the original texts, in their original languages, as we have seen, then translations into the various European vulgates and finally a spate of contemporary commentaries on classical works, particularly Dioscorides, of which the most noted were Petrus Andreas Matthioli's *Commentarii in VII libros Pedaeii Dioscoridis de Materia Medica*

¹⁰ published by Hubert JACOBS as *A Treatise on the Moluccas (c.1544)*, Rome (1971).

¹¹ It is worth pointing out that Italian botanists were much more responsive than the German to the widening of horizons with the discovery of new worlds overseas (though we need to thank the Germans for the leaps made in the technology of image production). Brunfels' *Herbarium vivae eicones*, published in 1530, makes no reference to any plant discovered in the New World.

¹² see Otto WARBURG, 'Wer ist der Entdecker der Gewürz-Inseln, Molukken?', who concludes that Vartheta's description of mace 'reveals such a mistaken understanding of the true state of things that it is unimaginable that a man who purposefully came to the islands in order to see the nutmeg grow could write something of this kind' (*zeigt eine derartige Verkennung des wahren Thatbestandes, daß es undenkbar erscheint, ein Mann, der gerade zu dem zweck die Inseln besuchte, um die Muskatnuß wachsen zu sehen, könnte so etwas schreiben*), 112.

¹³ HALIKOWSKI SMITH, Stefan (2001), Portugal and the European spice trade, 1480-1580
 GERARD, The *Theriacal Booke of the Historie of Plants*. London (1597), vol. II, chap. 139, 1343
 DOI: 10.2870/92585

(1554) and João Rodrigues de Castelo Branco's (*alias* Amato Lusitano) partial commentary *In Dioscorides Anazarbei de medica materia libros quinque enarrationes* (1553).¹⁴ This scrupulous philological re-reading is understood to have carried the natural scientist into direct observation and description. Matthiolus had highlighted how many important plants were no longer recognised and how many mistaken identifications had led to the use of wrong plants.¹⁵ In response to this widely accepted shortcoming, sixteenth century botanists across Europe undertook the weighty project of re-identifying the plants described by Dioscorides with living or dried specimens at hand, and to gauge how purely this information had been transferred through Galen and the late classical writers, down through the Arabs, Rasis, Avicenna and Mesue, to the 'moderns'. The question the botanists set themselves was whether the species at hand were truly new, or whether they had been previously described under other names. Thus, for example, Orta debated whether malagueta was the cardamom of the ancients. In the process of this task, they invested a closer look at the whole gamut of flora that grew directly around them, plants and vegetation not always brought to book by the ancients who had dedicated themselves mainly to Mediterranean and Levantine species. In this way, reworking classical texts led to the description of new plants and medicines. Exposition gave way to investigation.¹⁶

The re-working went as far as formulating powerful and bitter critiques of ancient thinking. Garcia de Orta is typical of the self-confidence of his age in his iconoclasm of orthodoxy and faith in eye-witness experience. He has gone down famous for declaring that he was not afraid of Dioscorides, nor Galen and that he would only state what he could ascertain (*'Não me ponhais medo com Dioscórides, nem Galeno, porque não hei-de dizer senão o que sei'*). He denounced the thousand tales borne by Pliny and Herodotus (*'as mil fabulas que Plinio e Herodoto traz'*). It is sometimes suggested that de Orta could afford to open his mouth as he was so far away physically from the forces of orthodoxy. But much the same arguments were reiterated by other botanists in Europe, most famously perhaps by Antonio Musa Brasavola at Ferrara, as such as we find in his *Examen omnium simplicium*

¹⁴ see the *Catalogus Translationum et Commentariorum*, ed. P.O. KRISTELLER & F.E. CRANZ, Washington (1971), a compilation of Renaissance editions undertaking 'critical reworking'. We might also mention Andrés LAGUNA's *Pedacio Dioscórides Anazarbeo, acerca de la materia medicinal y los venenos mortiferos..* (1555), a standard reference work in the Iberian peninsula, but which was based largely upon the earlier commentary on Dioscorides of Johannes Ruellius (Jean Ruel /de la Ruelle) (1516).

¹⁵ see the dedication in the 1548 edition of Pietro Andrea MATTHIOLUS's *Commentarii in libros sex Pedacii Dioscoridis Anazarbei De medica materia/ adjectis quam plurimis plantarum & animalium imaginibus, eodem authore.*

¹⁶ Giorgio COSMACINI, *Storia della medicina e della sanità in Italia. Dalla Peste Europea alla Guerra Mondiale*, 348-378, Bari, Laterza (1994), 72ff.
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medicamentorum (Rome, 1537).

It was this kind of investigative and yet, in the main, integrative ethic that saw the founding of botany as an independent branch of science, which has been hailed as ‘one of the great synthetic scientific achievements of the sixteenth century’.¹⁷ For the science of botany was forged not only from the interplay between written classical text and empirical observation, but from the reunification of the various bodies of knowledge concerning spices in existence; that of the Salernitan, and then the herbal tradition, which had evolved independently and locally. It is a delicate task to distinguish, date and trace the origins of the various intellectual currents which came together in sixteenth century accounts.

c) *The founding of botanical gardens and the beginnings of systematic botanical study.*

The work of physician-botanists like Garcia da Orta and Christoval Acosta is to be valued for promoting the systematic identification and denomination of individual plants from which study of their properties and applications might follow. They worked from direct contact with the plants themselves, often grown in experimental gardens *in situ*, and not, as previously, merely dried specimens shipped in from the East. Orta was the first to systematically set about classifying and describing the world of Asian botany, divulging concrete information on where and how these plants grew and how to diagnose correct specimens from related species, and hereby overtly challenging the classical canon of knowledge.¹⁸

In Europe, the study of botany went hand in hand with the move towards the founding of botanical gardens, from the first one founded by Ulisse Aldrovandi (1522-1605) in Padua in 1545.¹⁹ Although, in fact, the botanical garden grew directly out of a tradition of apothecaries’ gardens, botanical gardens were a part of a systematic project to collect and harbour the vast array of new plants discovered during the course of overseas exploration and empire-building, and from which committed investigation might follow, both on the plants themselves and for their application in the practical sphere, primarily that of ‘physicke’, as we can see from the allegorical frontispiece to the first treatise on the botanical collection of

¹⁷ Donald LACH, *Asia in the making of Europe*, vol. II, §‘Botany’, 428.

¹⁸ Orta’s work was much admired by his contemporaries, including the Flemish botanist Carolus Clusius, who translated and edited Orta’s work including a number of engravings and which was published as *Aliquot notae in Garciae Aromatorum Historiam - Antuerpiae ex officina Christophori Plantini*. (Antwerp, 1582).

¹⁹ see DEL CORTUSO, *L’orto dei semplici di Padova, che si vede primieramente la forma di tutta la pianta con le sue proprie Virtu (1594)*.
Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580

Oxford, but also particularly from the seventeenth century in agricultural innovation and as a laboratory for the transference of crop plants. Further, as Paula Findlen has shown, the emerging presence of natural history museums as an adjunct to the university botanical gardens underscored the new emphasis on demonstration and observation in the medical curriculum, which had started to demand that physicians learn the techniques necessary for the critical inspection of medicinal simples.²⁰ The dissection of spices and the scientific enquiry into their purported properties that went on in the milieu of the botanical garden, as I shall argue then, were an integral part of the process of de-mythologisation, and the dispelling of the mystique that, as we have already tried to show, bolstered the consumption of oriental spices in Europe up until the seventeenth century.

A host of smaller botanical gardens sprang up right across Italy, at the heart of the revival of botany, often the product of the attentions of a particular botanist. Pietro Bembo had one next to his magnificent villa in Padua, just as Andrea Navagero on the island of Murano, Ramusio in Venice and Antonio Brasavola on an island in the Po River. Following Padua in 1545, Pisa opened a botanical garden in 1547 and Bologna in 1567. Meanwhile, the Spanish physician and commentator on Dioscorides, Andrés Laguna, persuaded Philip II in 1555 to establish a botanical garden at Aranjuez, and a botanical garden in that great site of medical learning, Montpellier, followed equally.

The construction of botanical gardens soon spread to northern Europe. There was a botanical garden in Leiden and Amsterdam by 1587, and Heidelberg in 1597, and these were followed over the course of the seventeenth century by the opening of similar gardens in Oxford, Paris and Uppsala.²¹ But we can not be certain to what extent oriental spices were grown in these gardens. As we shall see in Chapter 12, import substitution was never effected commercially because the plants could not be grown in the severe European continental climates. But even if persuading many of the species to actually bear fruit was another matter, under a hot house it would have been quite feasible to at least grow them. The first indication of hot house construction is Johann Michael Heberer's description of the Hortus Palatinus at Heidelberg in 1582, though forty years later the envoy of the French King was still marvelling at them as a remarkable feat of German technical *virtù*.²² But even if the spread of hot

²⁰ Paula FINDLEN, *Possessing Nature. Museum, Collecting & Scientific Culture in Early Modern Italy*, Berkeley: University of California Press (1994), 259.

²¹ A. G. MORTON, *A history of botanical science: an account of the development of botany from ancient times to the present day*, London (1981), 121.

²² cited in Richard PATTERSON, 'The Hortus Palatinus at Heidelberg and the Reformation of the World', Halikowski-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580 *Journal of Garden History* (1981), 67-104.
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houses was patchy, Clusius reported that he had seen branches of cinnamon both in Holland and at Bristol. His botanical garden at Leyden, moreover, was famous for its 'Indian plants'.²³

There is little doubt, however, that exotics fared better in those botanical gardens of southern Europe that availed of softer climes. Bembo was recorded as growing lemons, oranges and the 'rarest simples', while the gardens at Padua and Pisa were thronged with eastern plants.²⁴ These gardens might have been fuller still, had the Padovan keeper Guilandino not been prevented for the East Indies from departing by corsairs, or Filippo Sassetti not been hindered in his sending specimens from India to his patron Francesco de' Medici for the lack of expert help from the locals.²⁵ We have a fairly good idea of what these plants were from a variety of sources: the Florentine humanist Alessandro Bracci wrote a verse extolling at least hundred of the plants his patron Lorenzo de Medici had recently 2 planted in his gardens at Careggi, while Giacomo Cortusi produced a guide to the botanical garden at Padova.²⁶ Of the traditional spices, the former mentions mace, spikenard, balsam, terebinth, sweet flag and mastic, the latter scammony, cardamom, tragacanth and pepper. Matthioli confirms that he managed to see pepper growing at Naples and at Venice in the garden of Maphei de Mapheo, but complained that he was unable to find a picture of the cinnamon tree as it could not be grown in Europe. Aldrovandi resorted to a 'great stick of real cinnamon from Portugal' for the preparation of his best theriacs.²⁷

Indeed, if I had hoped to demonstrate that if in part a result of what they managed to grow in their botanical gardens, Italian scholars, especially those located in the vicinity of Venice, were much more aware than the Germans of the exotic plants of Asia, then we might also like to suggest that the state of knowledge in the Iberian peninsula was almost certainly

²³ there is a description of the garden at Leyden in Peter OVERADT, *Hortorum Viridariorum.. elegantes et multiplices format* (1655), reproduced in the Morton Arboretum, Lisle, Illinois.

²⁴ V. CIAN, *Un decennio della vita di M. Pietro Bembo (1521-31)*, Turin (1885), 37n, 123; references to the gardens of Padua and Pisa can be found in John EVELYN, *Elysium Britannicum*, ms. in Christ Church Library, Oxford (since 1995 in the British Library), pt. II, ch. XVII.

²⁵ Richard PALMER, 'Pharmacy in the Republic of Venice in the sixteenth century', in WEAR, FRENCH & LONIE, *The Medical Renaissance of the Sixteenth Century*, 102; letter of Filippo SASSETTI, *Avvisi et varie Scritture di Spagna. anno 1545 a tutto l'anno 1589 - XX*, Archivi Generali Toscani.

²⁶ 'Alexandri Braccii descriptio Horti Laurentii Medicis Ad Cl. Equitem Venetum Bernardum Bembum', from William ROSCOE, *Life of Lorenzo de' Medici*, London (1846), app. XXV, 280-1; Giacomo CORTUSI, *L'orto dei semplici di Padova, oue si vede primieramente la forma di tutta la pianta con le sue misure.* Venezia: G. Porro, (1591). BEMBO wrote a fairly alaborate description of the garden of Queen Caterina Cornaro at Asolo Castle.

²⁷ Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
Biblioteca Universitaria de Bologna, MSS. Aldrovandi, ms. 70, c. 32v.

greater still. The diplomat, Andrea Navagero, for example, used the occasion of his embassy to Spain between 1524-28 to gather information on exotic plants.²⁸

9.2. The substance of demystification via the progress of knowledge.

a) *Geographic discoveries and the establishment of the true provenance of spices.*

Working out where exactly various spices came from was amongst the first information systematically sought out by the Portuguese arrivals in the Indian Ocean world. While the products of the tropical littoral of western India and news of the cinnamon producing island of Ceylon was appreciated much from the outset, the first detailed accounts of the spice islands in what is now the Indonesian archipelago were supplied by Varthema (1510), the otherwise spurious text accredited Juan Serano (1512), Barbosa and Pigafetta (1521). It was a number of desert-growing resin-giving plants of Arabia, ironically, that were slowest to be revealed to the world, as indeed the precise origins of central Asian spices such as rhubarb, which the Portuguese were happy to accept as generically provenant from 'Tartary and Turkey'.²⁹ Thus, for example, the origins of the *nux vomica* or vomiting nuts, which were unclear but eventually found to grow in south east Asia, were initially attributed by Gerard to the 'deserts of Arabia' as a form of default option.

Establishing what the individual spices were, and where they could be obtained was clearly a great step in de-mythologising spices from the shadowy oniric possibilities offered by supernatural contexts such as the terrestrial paradise. Orta could comment sarcastically, in response to the common belief that lignum aloes grew on terrestrial paradise, that he hadn't yet 'deserved' to go there, but having a fairly good knowledge of where the wood grew, he could ascertain that none of the four great rivers of Paradise flowed through the vicinity.³⁰ Raleigh could manage from there to scoff at the entire tradition that believed the river called Pison in Genesis to be the Ganges; indeed, after roaming the globe he scoffed at how it could be that 'The putative earthly paradises were *Vitious Countries*'.³¹

²⁸ see M. CERMENATI, 'Un diplomatico naturalista del Rinascimento, Andrea Navagero', *Nuovo archivio veneto*, N.S. XXIV (1912), 164-205.

²⁹ see, for example, Tomé PIRES, *The Suma Oriental*, 512.

³⁰ Garcia d'ORTA, *Coloquios dos simples, e drogas he cousas medicinais da India...*, Goa (1563), Colóquio 30.

Yet the links between the provenance of spices and such myths were extraordinarily slow to disappear even when first hand reports quickly established the precise geographical whereabouts of each individual oriental spice and the realities relating to its cultivation. Part of this might be the topographical inspecificity of fabulous myths: as we shall see, cartographers catered for the terrestrial paradise by repeatedly shifting it to the limits of the known world, before the representation finally disappeared altogether. Similarly, while the Isidorian fable of pepper clearing by fire so as to chase off mortal serpents can no longer be found beyond the end of the sixteenth century - the practice had empirically been shown to be otherwise - that of the fabulous barnacle goose, if dismissed by Fabio Colonna in 1592, was unable to be disproven and so remained untouched in the Lönitzer text until 1783!³²

But 'rational' explanations for the lingering myths of Antiquity are rarely adequate; often, it would appear to be a case of preferred thinking rather than simply ignorance, that the Europe of the Late Middle Ages preferred a romantic, fantastic view of other peoples and especially of the East, to the banality of what was reported thereafter as reality.³³ This would seem to confirm Olschki's findings, the curious fact that fantastic descriptions of the Asiatic countries and peoples spread as European travellers became better acquainted with the whole continent.³⁴ While it would be difficult to contend that contemporary reports were simply ignored, they need to be juxtaposed with the sustained respect for precedent. Contemporary eye-witness accounts had to contend at the printing presses with multiple editions in the vernacular of the Romance of Alexander and his letter to Aristotle, which were amongst the texts that had given wind to the genre of the marvels of India in the first place. The great cosmographers of the age like Sebastian Münster seem quite happy to plagiarize patently outdated authors like Marco Polo, as if history had left Cathay untouched for two hundred and fifty years, in the same manner as *The Grete Herball*, as late as 1526, could cite pathetically

³² see Fabio Colonna FABII, *Plantarvm aliquot historia: in qua describuntvr diversi generis plantae veriores, ac magis facie, viribusque respondententes antiquorum Theophrasti, Dioscorides, Plinij, Galeni, aliorúmque delineationibus, ab alijs hucusque non animaduersae*, Neapoli (1592).

³³ Amy Glassner GORDON, 'Autres Mondes, Autres Mœurs: French attitudes towards the cultures revealed by the Discoveries', in E.J. VAN KLEY & PULLAPILLY eds. *Asia and the West. Encounters and exchanges from the Age of Explorations. Essays in honour of Donald F. Lach*, Notre Dame (1986). It is an underlying theme of HUIZINGA's work that, in the medieval world, people's minds were caught in a tension between reality and idealised dream and that, in order to get a picture of the time, one must understand the dreams of an age as well as the realities: for the history of a civilisation, every delusion or opinion has the value of an important fact. *The Autumn of the Middle Ages*, trans. R.J. Payton & U.M. Mammitzsch, Chicago (1996). Le Goff has worked on these dreams (*l'onirique*), J. Le GOFF, 'L'occident médiéval et l'océan indien: un horizon onirique', in *Pour un autre Moyen Age. Temps, Travail et Culture en Occident: 18 essais*, Paris (1977).

³⁴ Leonardo OLSCHKI, 'Asiatic Exoticism in Italian Art of the Early Renaissance', *Art Bulletin*, New York, June 1941, pp. 146-160. Hankowski-Smith, Stefan (2007), 'Portugal and the European spice trade, 1480-1580', *Journal of European University Institute*

the provenance of cassia lignea as 'a lytell tree that groweth towarde the ende of babylon'.³⁵

While this rejection of the first-hand report and, indeed, the realistic, was to continue well into the Age of the Discoveries, we find the marvellous adapting itself to the more neutral ground of the exotic, which tends to be an evocation of a remote but nonetheless pre-fashioned set of objects or images.³⁶ Here we find texts, often like Ecluse's *Exoticorum libri decem* (1605), presented in an outwardly systematic and scientific manner; it is clear, nonetheless, that they distorted reality in an effort to suscite much the same reactions expected of a reader of Books of Marvels. Thus, in *La Galerie agréable du monde*, a huge 66 volume compilation of engravings depicting life in various parts of the world, methodically structured and published in Leyden in (1690), we find much the same underlying scheme and imagery, the Orient and her *nature généreuse*, a picture book crammed with every cliché of the European imagination: exploding volcanoes, elephant hunts, unlikely looking forests of bamboo and cloves (see Figure 10).³⁷

Nor could the myths be swept so easily from cartographic charts. It is interesting to follow the representation of Ptolemy's topos of Taprobana over time (see Figure 11). In general terms, one sees Taprobana move from its depiction as a giant, unrecognisable sub-continent sticking out into the Indian Ocean (as one finds as late as Sebastian Münster's *Cosmographiae Universalis*, Basel, 1558), through association with or projection on to re-discovered Ceylon (such as we might propose from the map of Henricus Martellus of circa 1489 or the parchment manuscript of a sailing atlas of the world, produced in Italy in 1540). In an exceptional case, Bernardo Silvano's Ptolemaic world map of 1511, we find the 'new' India together with Ceylon depicted side-by-side with the 'old' India and the huge island of Taprobana.³⁸

From association with Ceylon, Taprobana was mapped on to Sumatra. This is, for example, what we find as early as the Miller Atlas of 1519 in the Bibliothèque Nationale in Paris, or in Thevet's *Grand Insulaire et Pilotage* (1586-7).³⁹ But here the projection of

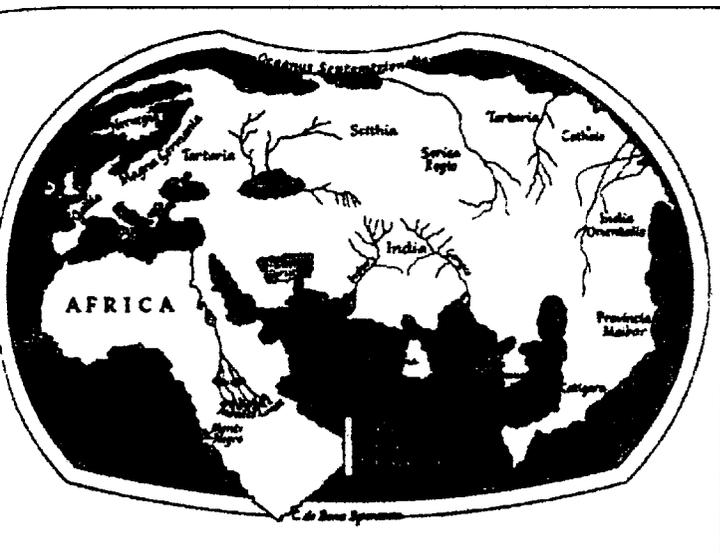
³⁵ *The Grete herball.. whiche geueth parfyt knowlege and vnd[er]standyng of all maner of herbs*, London (1526) pr. by Treueris in 170 folio pages and with 477 woodcuts.

³⁶ *Encyclopaedia Universalis*, 'L'Exotique'; Gilbert CHINARD, *L' Exotisme américain dans la littérature française au XVIe siècle d'après Rabelais, Ronsard, Montaigne etc.*, Paris (Hachette: 1911).

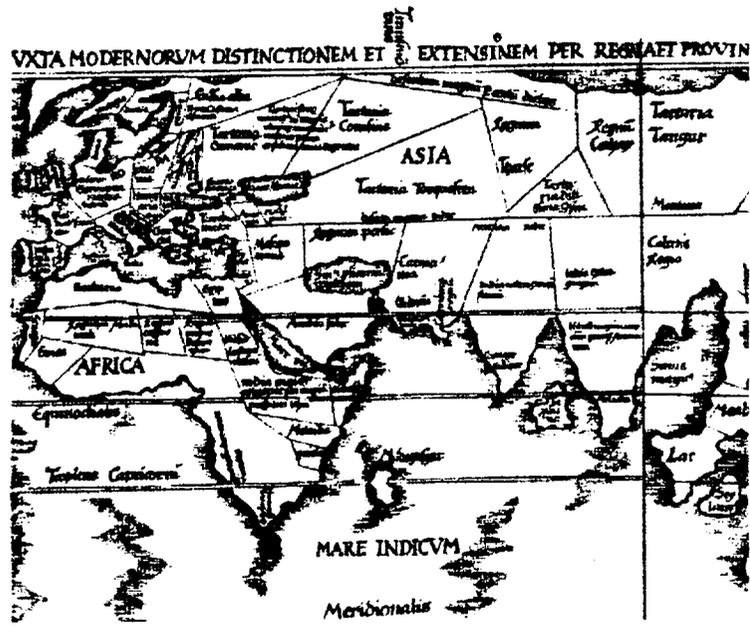
³⁷ *La Galerie agréable du monde*, ed. Pierr Vander, Leyden, (1690), 66 volumes; the image referred to is reproduced as in *C.G.E.R.*, (1992), 135.

³⁸ Giulia GUGLIELMI-ZAZO, 'Bernardo Silvano e la sua edizione della Geografia di Tolomeo', in the *Rivista geografica italiana*, 32 (pp. 37-56, 207-16) & 33 (25-52), (1925-6).

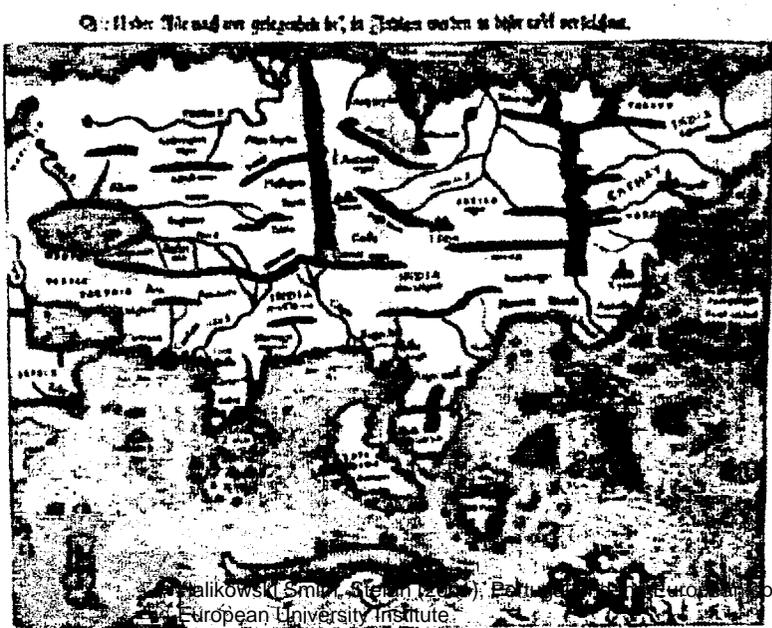
Figure 11. The displacement of cartographic myths: the case of Taprobana.



I. The classical Ptolemaic positioning of Taprobana, as an enormous sub-continental island floating 'sub equatoria circulo', from the world map of H. MARTELLUS, (1489).



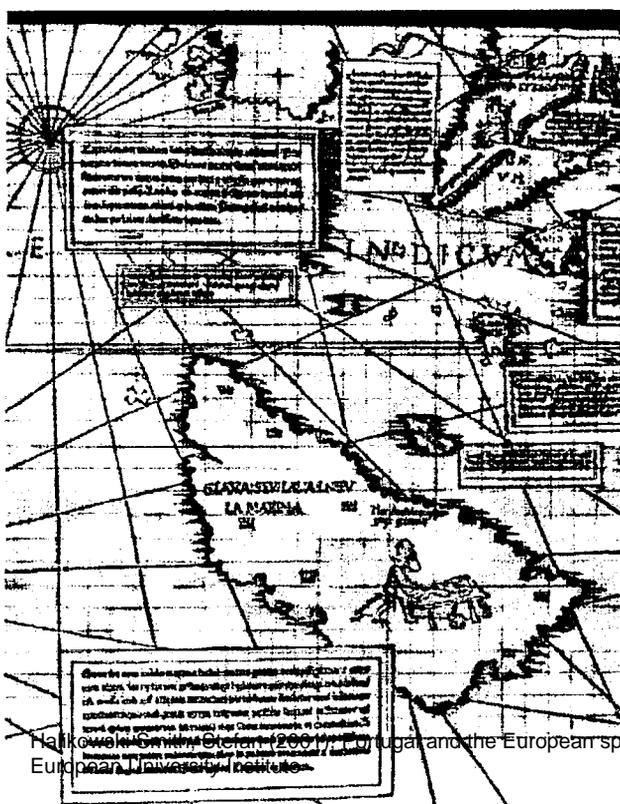
II. Gregor REISCH, *Typus Universalis Terre iuxta* .., Strassburg, 1515. Here two Indian sub-continent have effectively been sketched, and Ceylon ('Seylam') swept to the extremity of the second of them.



III. 'Die Laender Asie Nach Ihrer Gelegenheit'. In this map of Sebastian MÜNSTER (c.1561), it is Taprobana's turn (the big yellow island) to migrate to the East and occupy the geographical positioning of Sumatra whilst Ceylon ('Zeylon') assumes its rightful place.

Figure 11. The displacement of cartographic myths: the case of Taprobana.

IV. Here, in this upside-down folio map included in G.B. RAMUSIO's *Delle navigationi et viaggi* (Venice, 1554), from vol. I, the association between Taprobana and Sumatra is made explicit.



V. Detail of Martin Waldseemüller's precocious *Carta Marina*, engraved at Strasbourg in 1516. The cartouche in the top-left exposes the cartographer's dilemma (*Quam Taprobanam insulam dixerunt Ptholomeo, Plini etceteris vetustiores modo alii recensiores Sialon alii Samotrā volunt appellatam*) regarding the depiction of Taprobane; only after about 1640 does it become normal to no longer find Taprobana depicted on world maps.

Taprobana interfered with another cosmographical legacy of the classical world, the association that *Insulinde* came to enjoy with the Hellenistic Aures Chersonesus, or Golden Peninsula, which had for a long time been mapped (see, for example, the Martellus map of 1489) as a dangling appendage off the Asian underbelly to the east of India in concordance with the cosmographical scheme enunciated to Pope Leo X on the capture of Malacca: 'Golden Chersonese, which lies at the end of that great gulf wherein the River Ganges discharges her waters into the sea'.⁴⁰ But equally, Chersonesus became confused by geographers like Richard Eden with 'those odiferous islands of Molucca'.⁴¹ In an anonymous description of Portugal written in 1579-80, the myths of Taprobana and Aures Chersonesus become cross-confused to the point that Sumatra, understood to be Taprobana, was equally that 'which was called in antiquity Aures Chersonesus' (*che si chiamasse anticamente l'Aurea Chersonesso*).⁴² Confusion then reigned, where myths or classical notions were imposed over recently discovered lands; but at the same time, as we can see from the steady migration of Taprobana, the realm of the fantastic was being actively pushed back into the recesses of the unmapped globe that had hitherto not been or little investigated, a transposition of the *nec plus ultra*.⁴³ As Baudet has commented on this phenomenon, we find objects removed from a distant past to a distant present, from something remote in time to something far away, but still conceivably discoverable.⁴⁴ Thus we find Taprobana ultimately little more than a miniscule island pushed ever eastwards into the unknown, thrust to the *limes* of the depicted world, the margins on which monstrous and incredible forms proliferated.

Only gradually were the spice islands disassociated from classical myths and other remaining imaginative flourishes - the series of popular Plancius maps from 1598 are perhaps significant in this development in that we find the Moluccas at the centre-stage of things rather than on the ambiguous periphery - and if the depiction of Java and Borneo remained a little fuzzy until Mercator's series of *World Maps* produced between 1647-62 (Java tended

⁴⁰ Oration of Camillo Portio in front of the Pope, October 1513, and published in GRAY BIRCH, *The Commentaries of the great Afonso de Albuquerque, by his son*, (1875-84), ch. XXXIX, vol. 3.

⁴¹ Richard EDEN, *A Treatyse of the Newe India*, London (1553), in which a part of the fifth book of Sebastian Münster's *Cosmographiae universalis* was translated, repr. March of America series (1966).

⁴² 'Ritratto et Riuerso del Regno di Portogallo', kept in Hannover's Niedersächsisches Staatsarchiv St. A P 2399, and reproduced in OLIVEIRA MARQUES, *Portugal Quinhentista*, (1987), Chapter 8. Camões interprets likewise: 'A nobre ilha Samatra, que já d'antes/ Juntas ambas a gente antiga vio: Chersoneso foi dita', in GRAY BIRCH, *The Commentaries of the great Afonso de Albuquerque, by his son*, ch. XVII, 71.

⁴³ F. LESTRINGANT, *L'atelier du cosmographe ou l'image du monde à la Renaissance*, Paris (1992).

⁴⁴ H. BAUDET, *Paradise on earth, some thoughts on European images of non-European man*, Newhaven (1965), 15. HANKOBI SMITH, *Eden (2004), Portugal and the European spice trade, 1480-1580* DOI: 10.2870/92585

to be depicted as an isolated island satelliting a vast, unknown southern landmass in, for example, Willem Lodewyckxz's *Prima pars descriptionis itineris navalis in Indiam orientalem*, Amsterdam, 1598) the characteristic prongs of the principal island of the Moluccas, Halmahera, became ubiquitous and the tiny Banda islands clearly denominated.⁴⁵

The cartographic depiction of the terrestrial paradise, by contrast, disappeared much more rapidly with the collapse of the mappaemundi tradition embodied in the so-called 'T-O' charts, and their fundamental realignment according to the precepts of Euclidean space and a magnetic north-south grid system. This posed contradictions at different levels. As Eden pointed out:

Many have thought that the earthly Paradyse was sette under that lyne (the Equinoctial): which opinion is contrary to thauctoritie of holy scripture which witnesseth the two famous fluddes Tigris and Euphrates to springe out of Paradise: which nevertheless we know from the North partes to fal into the goulfe called Sinus Persicus..

Ultimately, Eden's qualification was not strong enough to see the terrestrial paradise rupture from its standard association with Taprobane ('in Mari Indico sub equatore') to move to the north of the equinoctial in accordance with the south-flowing Tigris and Euphrates rivers. Only Eden's fellow countryman, Walter Raleigh, who had devoted the better part of his life to roaming the globe in search of such a place across the tropics, insistently marked the terrestrial paradise, where there was gold, in Mesopotamia. Part of this might have been the enduring logic of the 'argument of reversal': that is, since Christendom was in the last analysis the offspring of Adam and Eve, the Garden of Eden, from which they were expelled need symbolically to have been in the Antipodes of man's current whereabouts. But generally speaking the whole construct of topologising paradise in the East collapsed, while the attentions of the age were seized by the Columbian discovery of the New World, a new continent, entirely divided from contiguous land masses and thus, in Edmundo O'Gorman's words, a 'challenge to the imagination', and where Paradise was actively sought out in its torrid austral regions by explorers like Brandonio, Vasconcelos and Gandavo.⁴⁶

Ultimately, however, the concept seems to have been too brittle for the Euclidean

⁴⁵ P. PLANCIUS, *Nova Tabula Insularum Javae, Sumatrae, Borneonis et aliarum Malaccam.*, Amsterdam: C. Claesz, (1598) and map of 1617 reproduced in Geoffrey SCAMMELL, *The World Encompassed: the first European maritime empires c.800-1650*, London: Methuen, (1981), 17.

⁴⁶ "'The End of the East". Columbus discovers Paradise', ch. 5 in Mary B. CAMPBELL, *The Witness and the Other World. Exotic European Travel Writing, 400-1600* with reference to Edmundo O'GORMAN, *The Invention of America*, Bloomington (1961); Sergio Buarque de HOLANDA, *Visão do paraíso*, 2nd ed., São Paulo (1999).
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revolution in cartography, though the myth lived on, reconceived in terms of the past, a paradise lost, to be rediscovered through archeological investigation, the great life project of the keeper of the Vatican Library, Augustus Steuchus, for example, or else lived on as a metaphor of the *locus amoenus*, a suitable motif to be recreated in European garden design.⁴⁷ The metaphor of the terrestrial paradise was similarly incorporated into the imagery of romance and was used famously by the Romantic poet Samuel Taylor Coleridge to describe Xanadu, the summer palace of the thirteenth century Mongol emperor Kubla Khan.

Indeed, it would be interesting to chart the disappearance of the concept of terrestrial paradise and its links to the world of spices by tracing the gradual etymological demise of 'grains of paradise' as a colloquial term for malagueta. We have already noted Barros' cynicism as regards the epithet; furthermore, over the sixteenth century the seeds were frequently called Guinea grains, or just 'graines', apparently following the Dutch habit.⁴⁸ But elsewhere, as in the Leipzig regulations of 1582 for the retail trade, one can note a fascinating transmutation in the term *Paradieskörner* to that of *Pariskörner*, a subtle leap from 'grains of paradise' to 'grains of Paris'.⁴⁹ A century later, this is still how malagueta was set down in Bauhin's botanical in the German language.⁵⁰ With this tangible demystification, 'grains of paradise' remained to evoke little more than a colourful form of speech.⁵¹

b) *Description, illustration and examination: the results of botanical study on spices at first hand.*

We can see this reflected in the evolution of a specific botanical language according to which plants were discussed, named and, ultimately, categorised. The point of departure were detailed physical descriptions, or *rhapsodia* in Brunfels' terminology, in terms of specific components such as leaves, roots, pistils etc. sweeping away the standards of earlier

⁴⁷ DELUMEAU, *Une Histoire du Paradis*, (1992), chapter VI entitled 'Nostalgie'. J. PRESTT, *The Garden of Eden: The Botanic Garden and the Recreation of Paradise*, New Haven (1981).

⁴⁸ H.H. JOHNSTON, *Liberia: with an appendix on the flora of Liberia by Otto Sappf*, New York: Negro University Press (1906), vol. I, 58 ff. Actually, 'grayns' seems to have a much older etymology, as we find in the medieval rhyme 'London Lickpenny', but could easily have been applied to cardamom as much as to malagueta. See Eleanor Prescott HAMMOND, *English verse between Chaucer and Surrey*, New York (1965), 239.

⁴⁹ G. FISCHER, *Aus zwei Jahrhunderten Leipziger Handelsgechichte*. . (1929), 221-2.

⁵⁰ BAUHINUS, *Neu vollkommen Krauterbuch. Mit schoenen und kuenstlichen Figuren*. . ., (Basil, 1672), 3 Buch, 1319.

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⁵¹ see *Open English Dictionary*, 2nd edition, entry as 'grains of paradise'.

descriptions whose in clarity could only have created confusion: to cite an example, ‘a tre havynge leves wrapped to-gedre. The fourme of the leves and fruyt is rounde, the tre of hymself is moist and most swete of odour’.⁵² Equally, description went beyond the facile similarities drawn between exotics such as ginger and the domestic, here the reed, or cinnamon like the willow, or pepper and juniper, which as we can see from Orta’s hostility to the comparison, tended to lead to misunderstanding as to the plant’s true form. Each plant was summarised through certain conventions: in the case of Castore Durante’s *Herbario*, it was presented next to an illustration, proceeded with its various names in Latin and Greek as well as its common name and those in the principal European languages; this was followed up by a systematic description of its form, its habitat, its Galenic qualities and virtues, both internal and external. Durante discusses how the plant grows and was cultivated, the shape of its leaves and their taste and odour, its root, how it produces fruit, and the time of year when it ripens.

But as we can perceive from Oviedo’s amusing attempts to describe the cactus in terms appreciable to a European, one soon arrives at the limit of what can be expressed in words.⁵³ Plates were needed and were consequently produced and widely divulged through the printing press. The tradition of simple woodcuts gradually gave way to delicate copper engravings, as we find in Leonhart Fuchs’ *New Kreüterbuch*. . (Basel, 1543), and in Rembert Dodoens’ *Cruydt-boeck* (Antwerp, 1644) coloured ink endowed an even closer approximation to reality. But it would be wrong to plot a smooth path of progress. Many of the lavish illustrations - here Theodor de Bry and Levinus Hulsius stand accused - were merely attempts at attracting sales’ profits. The popular cosmographies, with a greater circulation than the specialised herbals, employed domestic artists to depict the travellers’ written descriptions. The results, as we can see from the plate in Thevet’s *Cosmographie* devoted to cinnamon cultivation, is that while the trees were often patently inaccurate, the twills - well known back home - were faithfully represented.⁵⁴

The serious botanists, meanwhile, devoted great attention to detail: Brunfels’ title suggests he was reproducing ‘living portraits of plants’ (*Herbarium vivae icones*). These images were drawn from specimens at hand and no longer from hearsay or imaginative whim. Multiple plates were increasingly produced, both of the plant as a whole, accompanied by a

⁵² *The booke, of the nature of certayn herbes and stones and of Aristotles secrets*, ‘Ashmole’ version.

⁵³ Gonzalo Fernández de OVIEDO, *Historia general y natural de las Indias*, ed. Juan Pérez de Tudela Bueso, in *Biblioteca de Autores Españoles*, 5 vols. Madrid (1959), vol. I, 117-121.

cross-section of its fruit, flower or seed, often achieved, as Conrad Gessner boasted, only with the aid of a magnifying glass. When, as happened with a number of rarer or lesser known spices, the plant itself was not known at first hand, the spice was depicted independently of its plant, as we see repeatedly with the *pimenta de rabo*, the malagueta and the *nux vomica* as late as the *Histoire des drogues.. Garcie du Iardin*, published by Jean Pillehotte in Lyon in 1619.

I would like in what follows to investigate the process by which the plants giving spices came to be known to sixteenth century European botanists through a case study of the pepper vine, *Piper nigrum* Linneus. My concern here is to chart the course of the gradual textual erosion of the pepper myths, bearing in mind that the speed of their dissipation depended to large degree upon the genre of literature and that, for example, herbals and practical guides to medicine were largely situated outside the domain of myths prevalent in 'scholastically minded encyclopaedias' or mere compilations of old herbals such as Askham's *A Little Herball*, London (1561), Lönitzer's *Kreütterbuch* (1557) or the authors that da Orta finds responsible 'for the greatest fault' of 'merely repeat(ing) things so well known', such as Antonio Musa (Brasavolus) and 'the Friars' (Frs. Bartolomeo and Angelo Palla).⁵⁵

These myths included one we can attribute to Isidore of Seville and the late classical authors: that the pepper forests were burnt to get rid of dangerous snakes at the time of its harvest, and that the fire blackened the fruit. Bartholomaeus Anglicus incorporates it into his encyclopaedia, the *De Proprietatibus Rerum*, published in 1479, as does Von Cube in his *Hortus Sanitatis* of 1485, and it is implicated in Matteo Silvatico's *Liber Pandectarum medicinae*, Venice (1507).⁵⁶ The fires are left out but the snakes very much remain in the account of the pilgrimage of von Harff between 1496-99, and perhaps find greatest imaginative elaboration in Prester John's *Letter*, in which the serpents are presented as no ordinary snakes but are 'very large and have two heads and horns like rams, and eyes which

⁵⁵ Garcia d'ORTA, *Colloquies on the Simples and Drugs of India*, 46th Colloquy. MUSA was the author of *Examen omnium simplicium medicamentorum*, Rome (1536) amongst other works. Unable to trace the Minorite friars, though MARKHAM suggests they were eminent writers on drugs, the latter active at Venice in the early 1540s.

⁵⁶ BARTHOLOMAEUS ANGLICUS (fl. c. 1250), *De proprietatibus rerum*, Books 3-4 published from Bibliothèque Nationale ms. 16098 by James R. Long as *On the properties of soul and body*, Toronto: Pontifical Institute of Medieval Studies (1979); Johann Wonnecke von CUBE, *Hortus Sanitatis*, repr. Kölbl (1485); Matteo SILVATICO, *Liber Pandectarum medicinae*, Venice: Bonetus Locatellus, (1498). DOI: 10.2870/92585

shine with the brightness of lamps'.⁵⁷ Mandeville's account had discredited the story in no uncertain terms:

For if they made fires about the pepper, they should burn the pepper and the trees that it grows on, or else dry them so that they should no more bear fruit; and that is not true.⁵⁸

By the time Orta was writing his *Colloquies*, he uses the interlocutor Ruano, the scholastic botanist working in the Dioscoridian tradition, to denounce the myth, albeit with the understanding that 'St. Isidore cannot have said this because he believed it, but to relate what others said'.⁵⁹ Subsequent generations of botanists such as Gerard or Durante do not even trouble themselves to comment on the tale, though Askham, working a little earlier and from a very retrospective position, is guilty of its active repetition.⁶⁰

There is one variation on this theme iterated by Mandeville in which pepper was not allowed to dry by the sun, but 'putten upon an oven, and there it waxeth blak and crisp'; it had been understood, as Geronimo da Santo Stefano and Geronimo Adorno explain, that this was to prevent the pepper from sprouting ('pera que nom naça').⁶¹ But Friar Jordanus had long before directed his attentions against this myth, urging us 'not to believe that fire is placed under the pepper, nor that it is roasted, as some will lyingly maintain'.⁶² I have not found repeated, on the other hand, the strange tale of Philostratus in the third century A.D., which reports how the Indians, unable to reach the pepper growing at the tops of tall trees cleared the outlying undergrowth and threw down the pepper as if of little value; that under the cover of night, the monkeys that had witnessed the spectacle from their treetop hideouts mimicked it, so that the morning after the pepper could be gathered up easily from the

⁵⁷ *Pilgrimage of von Harff, 1496-99*, Hakluyt Society trans. and ed. Malcolm Letts, (1946), 170; Prester John's Letter is discussed in ZARNCKE, 'Der Priester Johannes', in *Anhandlungen der phil.-hist. Classe der k. sachsischen Gesellschaft d. Wissenschaften*, no. vii (1879) and no. viii (1883), 912 and reproduced in passage #4, 504-5, vol. II.

⁵⁸ MANDEVILLE, *Of Divers Kingdoms and Countries*. ., Egerton version, ed. R. Latham (1972), 287.

⁵⁹ ORTA, *Colloquies on the Simples and Drugs of India*, 43/371.

⁶⁰ ASKHAM, *A Little Herball*, London (1561).

⁶¹ Sir John MANDEVILLE, 1322-56; 'Viaggio di Geronimo da Santo Stefano e di Geronimo Adorno in India nel 1494-99', published by Valentim Fernandes in *Ho livro de Marco Paulo* (1502), and again by Prospero Peragallo, Rome (1901), 9.

ground.⁶³

Another long standing and often contradictory set of myths concerned white pepper, which was considered of greater value than black pepper as a result of its rarity and ability to 'keep its virtue' and was thus greatly esteemed at 'the table of kings'. Some sources suggested that white pepper had made a trip through the intestinal tract of birds, where it was discoloured.⁶⁴ The classical position that we owe to Dioscorides, held that black, white and long peppers all stemmed from the same tree. White pepper was gathered before the black berries ripened, which is why it was sour, while long pepper, which is indeed little more than an inflorescence or spikes of flowers, was held to come first of all. This is the position we find sustained through the Middle Ages, continued by early modern compilers such as António Musa and the 'Friars' and reiterated by Orta's Dioscoridian interlocutor Ruano.⁶⁵ Only in Mandeville and Polo is there a slight discrepancy: here, white pepper comes after the black, though the Egerton version of the latter's text swiftly makes good what it understands to be an error.⁶⁶

Orta himself takes the opposite position, that they were in fact three separate plants:

'In Malabar the plant is of two kinds. one being the black pepper and the other white; and besides there is another in Bengal called the long pepper.. The black and white pepper trees are very like each other, and only the people of the country can tell them apart, just as we cannot tell the black from the white vines unless they are bearing grapes'.⁶⁷

The truth lies in the middle. Long pepper is, indeed, a separate species; white and black pepper, however, are of the same plant. In fact, it is not a question of when the fruit was picked that renders the fruit black or white, but whether the berries are decorticated or not.

If Orta was able correctly to inform us that long pepper grew in Bengal - a fact which continued to stall a number of his successors such as Gerard - and Hakluyt suggested it could

⁶³ cited by Albert DEMAN, 'De Muziris à la Via Biberatica', in *C.G.E.R.*, 126.

⁶⁴ cited by G. CAPUS & D. BOIS, *Les Produits Coloniaux: origine, production, commerce*, Paris: A. Colin (1912), 241.

⁶⁵ see, for example, VINCENT OF BEAUVAIS, *Speculum Naturalis*, xiv, 64; Johann Wonnecke von CUBE, *Hortus Sanitatis*, repr. Kölbl (1485): 'A macro qo est longū. Das ist langer pfeffer und wan der gar zytig ist so ist es swartz. uñ wā er noch nit gezytigt ist so ist er wyß'.

⁶⁶ *The travels of Marco Polo*, trans. and ed. by Ronald Latham (1958, repr. 1972), 287. c.f. *The voyage and travaille of Sir John Maundeville Kt. c. 1400*, re-published (1839): 'Long peper, blak peper and white peper. The long peper comethe first..', xv. 168.

⁶⁷ Reattributing the authorship of Dioscorides to the European, Orta himself, 45 (373), in Garcia D'ORTA, *Colloques on the Simples and Drugs of India*. 'Forty-sixth Colloquy'. DOI: 10.2870/92585

also be found at Malacca, I have not been able to trace a sixteenth century plate of the plant as a whole, but just the stalk and inflorescence, often depicted held by a hand.⁶⁸ Many botanists, like Lönitzer, continued to imply that long pepper originated from the same plant as black pepper.⁶⁹ So that illustrations tended to restrict themselves to the tips, familiar already to European consumers and merchants and conventionally likened to the buds of the hazel (or the *Zaseln* of the nut tree) - though we have a vivid description from Monardes, cited by Gerard:

This tree is not great, yet of a woodie substance, dispersing here and there his clasping tendrils, wherewith it taketh holde of other trees, and such things as do growe neere vnto it. The branches are many and twiggie, whereon doth grow the fruite, consisting of many graines growing vpon a slender footestalke, thrust or compact close together; greene at the first, and afterwarde blackish.⁷⁰

The myth of an independent white pepper took new impetus from Orta's mistake. Gerard (1597) stated that:

the plant that bringeth white Pepper is not to be distinguished from the other plant, but onely by the colour of the frute, no more than a Vine that beareth blacke Grapes, from that which bringeth white: and of some it is thought that the selfe same plant doth sometimes change it selfe from blacke to white, as diuers other plants do.⁷¹

Durante (1585) supplied two different illustrations for the white and the black pepper, and

⁶⁸ see, for example, CLUSIUS, *Exoticorum libri decem, quibus animalium, plantarum, aromatum, aliorumque peregrinorum fructuum historiae describuntur: item Petri Bellonii observationes, eodem Carolo Clusio interprete. Series totius operis post praefationem indicabitur*, Raphalengii, (1605), Lib. 1, 183.

⁶⁹ LÖNITZER (LONICERUS), *Kreuterbuchs*, cap. CCCXCVIII, (1587).

⁷⁰ GERARD, *The Third Booke of the Historie of Plants*, 1355-56. How could it be cited from MONARDES, who was most read for the plants growing in the New World? His work, *Historia medicinal de las cosas que se traen de nuestra Indias Occidentales, que sirven al uso de medicina...*, Seville (1571) was projected along the lines of Orta's work and was extensively translated: into Latin, by Clusius in 1574 and 1582, into Italian in 1589, and into a joint edition alongside Acosta and Orta in Antwerp in 1593 and by Clusius in 1605. Frank Anderson, however, suggests his botanical work was entitled *Dos Libros*. Might we be confusing a plant we have otherwise ascribed as the *Xylopiya aromatica*, a variant of the Ethiopian pepper? But, on examination, the description would appear to match the long pepper more closely than the podded fingers of the Ethiopian pepper.

c.f. Castore DURANTE, *Herbario Nuovo di C.D., Medico & Cittadino Romano, Configure, che rappresentano le viue Piante, che nascono in tutta Europa, & nell' Indie Orientali, & Occidentali*, Roma (1585), 'è frutto, che fa una pianta alta, lunga della grossezza d'un dito. E questo frutto circa un palmo lungo. Il fondamento è un fusto molto sottile, e sopra di quello stanno molti granetti incastrati insieme della grossezza detta. Leuato dal fusto il sole lo matura, fa nero.'

repeats Orta's analogy to the vine.⁷² The myth, thereafter, seems to have taken an interesting turn. Matthiolus, in a German translation of 1626, reverts to the Dioscoridan idea that white pepper was merely picked prematurely:

The white pepper from Sunda is gathered unripe/ as a result of this it is not so sweet and sharp/ as the black.⁷³

How long did it take for the truth regarding the origins of white pepper to be established? Orta, ironically, had brushed the truth in his discussion with Simão Álvares the Indian druggist in 1548, who had refuted Orta's position sustaining that white was created 'from having cast off the outer rind, a thing which often happens with old pepper when much rubbed'. In this instance, Orta's fallacious position prevailed after consulting the King of Cochin.⁷⁴

It would be interesting to chart the gradual appreciation that pepper was a creeper and not a tree. The misunderstanding had sprung from Dioscorides' description of a short tree, and was only compounded by his classical successors' imprecise allusions to domestic shrubs, such as the myrtle or juniper.⁷⁵ The fallacy should have, to all intensive purposes, been set right by Cosmas Indicopleustes, who in the sixth century had pointed out that pepper was an epiphyte or creeper that grew around other trees and was comparable to the delicate shoots of the vine, but other stories persisted.⁷⁶ Rabbi Benjamin stated in 1166 that: 'the trees which bear this fruit are planted in the fields.. [and] are small'.⁷⁷ Only with the series of fourteenth century travel accounts, most of them eye-witness, was the Indicopleustes'

⁷² DURANTE, *Herbario Nuovo di C.D.*, (1585), 342-3.

⁷³ 'Der sunde weisse Pfeffer ist vnzeitig enngesam̄let/ darum ist er nict so lieblich vnd scharpff/ als der schwartze', MATTHIOLUS, *Kreutterbuch deß P.A.M.: Sampt dreyen wolgeordneten nützlichen Registern, der Kreutter Lateinische und Teutsche Namen und dann die Artzeneyen, darzu dieselbigen zu gebrauchen, inhaltendt; Beneben gnugsamem Bericht von den Distillier und Brennöfen*. Frankfurt a.M.: Fischer (1626), cap. LXXXVIII, 182.

⁷⁴ ORTA, *Colloquies on the Simples and Drugs of India*, 46/374 and Luís de ALBUQUERQUE, *Dicionário de história dos Descobrimentos Portugueses*, 'pepe'.

⁷⁵ PLINY, *Historia Naturalis*, bk. XIV.

⁷⁶ COSMAS, Indicopleustes, ed. by J.W. McCrindle as *The Christian topography of Cosmas, an Egyptian monk*, London: Hakluyt Society (1897), Bk. XI.

⁷⁷ *Early Travels in Palestine: comprising the narratives of Arculf, Willibald, Bernard, Saewulf, Sigurd, Benjamin of Tudela, Ibn Suleim (1000), Peritza and the Brethren of the Common Law, and Meunier*, ed. T. Wright, London: Bohn, (1848), 114.

hypothesis consolidated; the allusion to the vine confirmed by Sir John Mandeville (1322-56), Odoric, Friar Jordanus and Marignolli, who in the mid-fourteenth century extended the comparison by suggesting that pepper was trained to grow from a planted stock as in vineyards.⁷⁸ These were the most likely sources for the miniature in the *Livre des Merveilles* reproduced in this thesis as Figure 5. But even after the wave of eye-witness accounts in the wake of the Portuguese ‘Discoveries’, the Plinian myths persisted in the face of established fact. Askham, as late as 1561, was reiterating the time-worn fallacy that pepper constituted ‘frutes of trees’, citing the explicit authority of Dioscorides and Cōstantine (?).⁷⁹ Gerard, surprisingly, brings the whole issue back into discussion by suggesting that it was ‘disputable.. whether we may call it [the plant that beareth Pepper] a tree or an herbie plant’. Pillehotte, equally, produces a plate of the *poivrier* which he accredits to Thevet and is in the likeness of a free-standing tree.⁸⁰ The path to clarification had been side-tracked by a rare state the pepper can assume, like the ivy, when, having suffocated its host support, the epiphyte is obliged to create its own so as to avoid collapsing to the ground. Lönitzer reminds us that the pepper can take on numerous different forms. But this only obfuscates the botanical fact that first and foremost the pepper is a creeper or climbing plant, as Lönitzer acknowledges (‘Es wächßt der Schwarz Pfeffer.. / welche sich an andere Bäume auffrinden’); much of the confusion seems to have stemmed from the fact that as a botanical category the epiphytes still awaited their author.⁸¹ It seems, then, that from the travel accounts reaching Europe in the fourteenth century, pepper continued to be referred to as a tree rather out of semantic laxness than concrete ignorance.⁸²

We might equally like to trace the disappearance of belief in and representation of the Dioscoridian sheath or pod (χερατωνία) considered, according to the classical fallacy, both the long pepper and the housing to the grains of black pepper.

The fruit as it first puts it forth is long, resembling pods; and this long pepper has within it (grains) like small millet, which are what grow to be the perfect (black) pepper. At the proper season it opens and puts forth a cluster bearing the berries such as we know them.. Those that are like

⁷⁸ see, for example, YULE ed. *Cathay and the way thither*. ., Appendix xlvi.

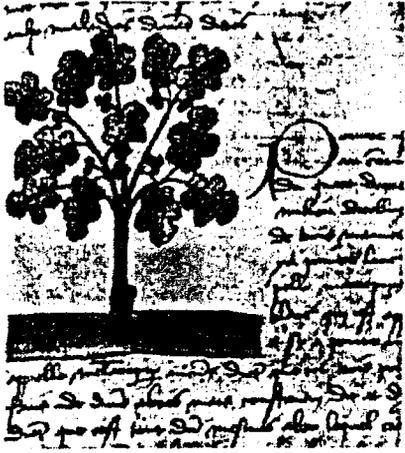
⁷⁹ ASKHAM, *A Little Herball*, 11. Von CUBE, in his *Hortus Sanitatis* (1485) speaks of pepper as ‘eyn baum’ on Serapio’s authority. What is this source?

⁸⁰ PILLEHOTTE, *Histoire des drogues.. Garcie du lardin*, Lyon (1619).

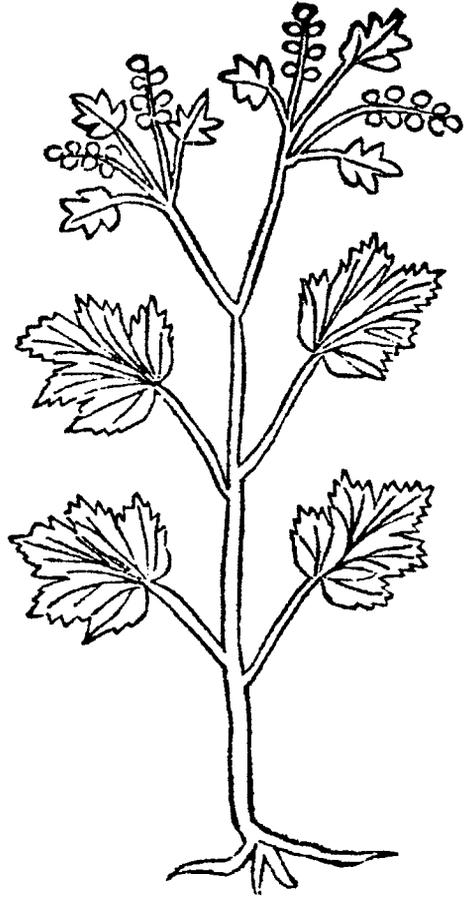
⁸¹ LONICERUS, *Kreuterbuchs*, cap. CCCXCVIII. (1587).

⁸² such as Castore DVRANTE, *Herbario Nuovo di C.D.* (1585), whose plate would suggest otherwise; Sir John MANDEVILLE, who similarly had already likened the pepper to a vine; even ORTA, *ibid.*, 40. Hankowski Smith, Stefan (2007), Portugal and the European spice trade, 1480-1580
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Figure 12. The pictorial evolution of the pepper plant.

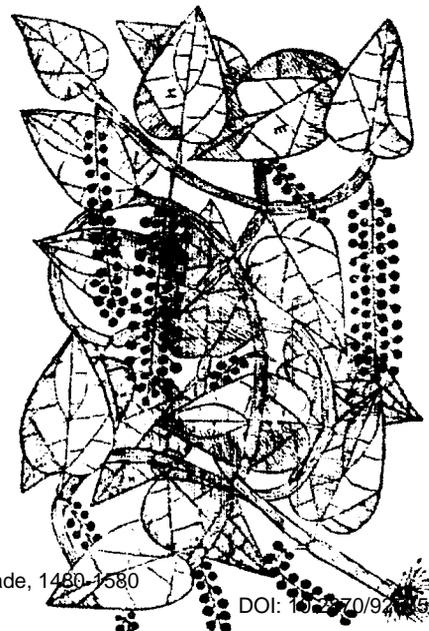


I. Miniature from *the Livre des simples médecines*, 15th century, Bibliothèque Royale Albert Ier, ms IV 1024, 160v.



II. Johann Wonnecke von CUBE, *Hortus sanitatis*, Mainz, (1485), repr. K. Kölbl, Grünwald (1966), cap. CCCXXIX.

III. DIOSCORIDES, *De Medicina materia*, Frankfurt (1549).



IV. Cristovão da Costa, *Tratado das drogas e medicinas das Indias Orientais* (1563), repr.



Figure 12. The pictorial evolution of the pepper plant.

PEPE NERO.

V. Castore Durante, *Herbario nuovo.*., Roma (1585), facs. ed. Fano (1980).



VI. GERARD, *Herball or General Historie of Plants*, London (1597), chap. 146, 1356.

VII. F. PILLEHOTTE, *Histoire des Drogues espisceries, et de certains medicamens simples, qui naissent es Indes & en l'Amerique.*., (a translation of Garcia d'Orta), Lyon (1619).





unripe grapes.. constitute the white pepper.⁸³

Consequently, we find the pepper plant represented in numerous sixteenth century editions and re-editions of the *De Medicina materia*, such as the 1549 Frankfurt edition held by the Bibliothèque Royale Albert 1er (see Figure 12), as the characteristic ‘footstalke’ or sheath of the long pepper, from which pedicled grains of black pepper are seen to hang forth.⁸⁴

Interestingly there is not a conceptual congruity between the collapse of the Dioscoridian sheath and the process by which a unitary pepper plant was discredited, a story we have already traced. In other words, there seems to have been a long period in which long, white and black pepper were all considered to stem from the same plant, which implied its own consequent representation, and yet a co-existent acknowledgement, as we can appreciate today, that the fruit ‘grows in bunches like grapes’.⁸⁵ For the idea that black pepper grew housed in the Dioscoridian sheath no longer held any currency in late medieval and early modern Europe, as we can appreciate from Mandeville’s purported travels, from the fourteenth century *Livre des Merveilles* and the reproduction from Johann Wonnecke von Cube’s *Hortus Sanitatis*, Mainz (1485).⁸⁶

We might take our iconographical analysis a little further. It came to be shown that pepper did not grow as small, somewhat shrivelled black grains as was depicted in a long tradition including Cristobal de Acosta, in his *Trattato della Historia natura et virtu delle droghe medicinali (...) delle Indie orientali...*, Venice (1585) or in the *Herbario* of Castore Durante (Rome, 1585), but as Mandeville had informed two hundred years earlier, as green berries (‘as it were ivy berryes’), such as we find in the figure Gerard takes from Mathiolus, if ‘condemned of most to be faigned.. in the close and round bunches of fruit’ (1356) and, more accurately still, in Pillehotte’s *Histoire des Drogues..* (Lyon, 1619).

c) *The project of classification: relating plants to one another.*

Far from the principal preoccupation of medieval herbals, which were principally

⁸³ DIOSCORIDES, *De materia medica*, ii, 188.

⁸⁴ The only other possible misunderstanding that comes to mind is that pepper was mistaken for the cubeb, whose inflorescence closely resembles that of the black pepper (see plate #) and whose fruits are elevated on a sort of stalk, formed from the contraction of the base of the fruit itself.

⁸⁵ the phrase is taken from ORTA, *Colloquies on the Simples and Drugs of India*, 41/369.

⁸⁶ could it be that Dioscorides confused black pepper with cubeb? The image reproduced in the Frankfurt 1549 edition is uncannily similar to that of the *Hortus Sanitatis* (1485), Portugal and the European spice trade, 1480-1580
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utilitarian in design and tended to follow the plan of the so-called 'Dioscorides alphabeticus', such as we find the format of the *Secretum Secretorum* (though the alphabetic order in Dioscoridean texts such as the edition published 'apud Ioannem Schottum' in 1529 leaves a lot to be desired) classification had previously been made on the roughest of distinctions.⁸⁷ Theophrastus had schematised the plant world into shrubs, trees, under-shrubs and herbs. Pliny had split Indian plants into exotic woods, fruits, grains, scented wood, perfumes and unguents, while the encyclopaedic taxonomia of the Middle Ages was simpler still, commonly herbs and trees, and exotic (or aromatic) from common species. The German botanist Otto Brunfels, in his *Herbarium vivae icones* (1530), failed even to understand that different geographical regions have their own characteristic plants; but recognised ferns, mosses and conifers as separate groups of plants.

Greater rigour was gradually drawn out of the neo-Aristotelian currents prevailing in western science and the movement towards the formal foundation of the discipline of botany as more than a mere scion of medicine ('*un chapitre de la médecine*'), tied as it was to the coat-tails of *materia medica*, with the creation of its own scientific programme.⁸⁸ A principal point of departure was, as we have seen, systematic description and illustration, but also denomination, which became a major concern of Renaissance herbalists with efforts made to standardise such knowledge across linguistic barriers. William Turner's *A New Herball*, for example, compiled an inventory of 'The Names of Herbes in Greke, Latin, Englishe, Duche and French wyth the commune names that Herbaries and Apothecaries Use'. Amato Lusitano was the first to think of providing the native names for Indian plants, though he did so erratically. But the concensus holds that only with the Italian scientist Cesalpino's *De Plantis libri XVI* (1583) did a strictly botanical classificatory system capable of weighing up *differentiae* from *affines* start to be devised for its own ends, with the critical faculty brought to bear on previous classificatory systems and *accidentia*, groupings based on inconsequent characters such as scent, taste, habitat, or utility to man. As he explained in the dedication of his work to Duke Francisco Medici:

Since science consists in grouping together of like and the distinction of unlike things, and since this amounts to the division into genera and species, that is, into classes based on characters which describe the

⁸⁷ Pedanius DIOSCORIDES, *De materia medica*, 1529 edition, repr. New York: Readex Microprint, (1974).

⁸⁸ *Encyclopaedia Universalis*, 834. The first chair of botany (*professor simplicium*) was instituted at Padua in 1533.
Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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fundamental nature of the things classified, I have tried to do this in my general history of plants.⁸⁹

Cesalpino's personal classificatory system, if founded correctly on the plant's reproductive organs, has been lambasted as 'a series of groups in the highest degree unnatural'.⁹⁰ It is true that he failed to distinguish between one-seeded fruits and true naked seeds, though this was not corrected until the nineteenth century, and that he failed to take into consideration parts of the flower other than the fruit itself, the stamens and corolla, for example.⁹¹ But the fact that the classificatory project had been set in train along the right lines, in terms of species and genera, the fundamentals of the Linnean binomial system which holds sway today, held great significance for the ultimate demystification of spices. Da Orta had already brought together cinnamon and cassia under the same species, which had long been considered separate plants.⁹² But more importantly, the reduction of Indian plants to the same classificatory structure as the European paved the way for parallel integration into the herbal compendium.

But if at a theoretical level, the distinction between herb and spice no longer stood, the integration of overseas plants into the herbal was patchy and haphazard and was typically neither as systematic nor as prolific as the additions of indigenous flora.⁹³ Gerard considered the exotics in a lengthy section added at the end of his work, *The Herball, or General Historie of Plants* (1597). Specialised works dealt with them specifically, beginning with Orta's *Colóquios dos simples, e drogas he cousas mediçinais da India. .* (1563) and through to Charles l'Ecluse's *Exoticorum libri decem* (1605), but the latter's categorisation was poor - into *Arbores et Frutices*, then *Lobi* (pods), *Cortices aromaticos*, *Resinis et Succis*, *Radicibus* - while another book is given over with unavoidable overlap to *Aromatum, et Simplicium*

⁸⁹ cited in MORTON, A. G. *A history of botanical science: an account of the development of botany from ancient times to the present day*, London (1981), 135.

⁹⁰ R.J. HARVEY-GIBSON, *Outlines of the History of Botany*, 19 (Bib. delle Scienze).

⁹¹ C.E.B. BREMEKAMP, 'A re-examination of Cesalpino's classification', in *Acta Botanica Neerlandica*, I, 508-593, (1953).

⁹² Garcia d'ORTA, *Coloquios dos simples, e drogas he cousas mediçinais da India. .*, (1895) ed., v. II, 206, and for the wider debate, Richard PALMER in WEAR et al., *The Medical Renaissance of the Sixteenth Century*, Cambridge U.P. (1985), 106. PLINY had included both in the same chapter of his *Historia Naturalis*, lib. XLII, but this unification was subsequently set aside as manifest from authors like John RUSSEL, Niccolò de CONTI and Duarte BARBOSA, see Appendix 8.

⁹³ BRUNFELS, *Herbarium apicicum* (1530), for example. Pliny, *Historia Naturalis*, lib. XLII, 1480-1580. See also (2007), 4 Portugal and the European spice trade, 1480-1580

aliquot medicamentorum apud Indos nascentium Historia.⁹⁴ The massive botanical compendiums of the seventeenth century - the four thousand plants included in Jean Bauhin's *Historia Universalis Plantarum* (1613), or the 6000 in Jean's brother Gaspard's *Pinax* of 1623 - swept plenty of overseas plants into their ranks as part of their encyclopaedic frenzy, but did rather little in the way of following up on Cesalpino's innovations. Parkinson's *Theatrum Botanicum* (1640) made a point of presenting itself as 'an herball of large extent. . . increased by the access of many hundred of new, rare and strange plants from all parts of the world'. However, if such tomes dealt with the exotics comprehensively, they simply grouped them together as such, rather than in any more systematic, familial sense. The division into different books reveals very little evidence of any underlying metatextual scheme; in the edition of Bauhin's work that came out in Basel in 1687, the first three books are all identically and unhelpfully entitled 'Von Kräutern'.⁹⁵

d) *The ruptures in medical theory brought about by the discovery of the micro-organic world and the ensuing pharmacological revolution.*

The steps forward engineered in botanical science over the period appear huge leaps when compared to the relative stagnation of pharmacology and medical theory generally. While contemporary authorities such as Thevet were drawn upon for physical descriptions and reports of origins in the compilation of sixteenth century herbals, knowledge of medical effect remained rooted in the ancients. Gerard's *Herball*, published right at the end of the sixteenth century, situates the 'vertues' of plants firmly in the Dioscoridian, Galenic and Avicennan prescriptive tradition. It has been suggested that Francisco Hernández may have been representative of a new generation of physicians in that he classified his studies primarily according to their observed physiological effects, and only then catered them to Galenic specifications.⁹⁶ But, whatever the validity of such empirical excursions, or as Talbot has noted, the impressive number of drugs from the New World recorded and set down in herbals,

⁹⁴ Is there any overlap with what might well appear a different specialisation, epitomised by Prospero ALPINI's *De Medicina Aegyptiorum* (1591); *De Plantis Aegypti Liber* (1592)?

⁹⁵ BAUHIN, *Neu vollkommen Krauterbuch. Mit schönen und kuenstlichen Figuren/ alle Gewachs der Bäumen/ Standen und Krautern/ so in Teutschen und welsche Landen/auch in hispanien. . .*, (Basileus, 1687).

⁹⁶ 'New and Old Worlds', in COWEN & HELFAND, *Pharmacy: An Illustrated History*, New York (1990), 64. Hernández was sent by Philip II to Mexico to study natural history and its relations with medicine from 1570-77. His work, amounting to 17 volumes, perished in the Escorial fire of 1671, but survives in abridgments made by the Italian RECCHI, *Rerum Medicarum Novae Hispaniae Thesaurus*. (Roma, 1628) and, more extensively, by Francisco JIMÉNEZ, *Quatro libros de la naturaleza y virtudes de los árboles, plantas y animales de la Nueva España en especial de la provincia de México, de que se provecha la medicina* (Méjico, 1615).

nothing succeeded in overturning the weighty idiom of classical opinion and manner of preparations.⁹⁷ The manuals of instruction for compound medicines, the dispensatories, seem to have been particularly conservative; rote lists of classical recipes spelt out according not to medical diagnosis but mode of preparation. Inventories of early modern pharmacies demonstrate how slow new opinion, in the form of recent editions, was to circulate. The Sibiu pharmacy's inventory of 1580 reveals a library constituted of a *Dispensatorium Nicolai et Platear de simplicibus*, a Salernitan text of the 1140s, early medieval Arab medical treatises of Avicenna, Johannes Mesuae and Iohann Filii Serapio, a commentary on Pliny's *Natural History* and, of the most recent texts, the *Practica Iohannis Anglici* which appeared in Venice in 1498/99 and the ubiquitous *Lumen Majus et Minus* of the same period and provenance.⁹⁸ Even in Venice itself, at the head of pharmacological innovation, apothecaries (*speziali*) right through the early modern period were expected to prepare the 28 theses for their exams from Saladino d'Ascoli's *Compendium Aromatoriorum*, first published there in 1491.⁹⁹ In Bruges, a series of 63 labels with descriptions of various drugs and spices dating to the second half of the seventeenth century has been discovered in the Sint-Janshospitaal. The texts are little more than direct translations of 174 Greek versets compiled by Andromachus of Crete in the first century A.D.¹⁰⁰ And as late as 1771, Bologna's principal medical college's *Antidotario* was still based on that of the twelfth century physician Nicholas of Salerno.¹⁰¹

European medicine seems to have come away with very little from its encounter with other medical traditions in the wider world, even where the pharmacopeia was much the same, as we might imagine was the case with the Ayurvedic medicine practised in Malabar.¹⁰² Garcia Da Orta, himself a physician and resident there, seems on the whole to

⁹⁷ Charles H. TALBOT, 'America and the European Drug Trade', in Fredi CHIAPPELLI ed., *First Images of America*, Berkeley: U.C. Press, (1976), vol. 2, 836.

⁹⁸ Sibiu State Archives, Materia V, No. 2118/1580, summarised by Eva CRIȘAN, *Materia Medica de Transylvanie*, 36-38.

⁹⁹ *Per una storia della farmacia e del farmacista in Italia*, § II 'Venezia e Veneto', ed. Angelo Schwarz. collana Schiapparelli, Bologna : Skema. (1980), 10.

¹⁰⁰ cat. #44, Bruges Memlingsmuseum and Sint-Janshospitaal. cited by Carmélia OPSOMER in *C.G.E.R.* 55.

¹⁰¹ CAMPORESI, *Bread of Dreams: Food and Fantasy in early modern Europe*, (1989), 25.

¹⁰² John M. de FIGUEIREDO, 'Ayurvedic Medicine in Goa. According to the European Sources in the XVI and XVIIth Centuries', in William K. STOREY ed., *Scientific Aspects of European Expansion*, Aldershot (1996). The historiography of indigenous medicine in these parts of the world is otherwise very little developed; it is typically dismissed in the face of a European tradition 'de espírito e em formação intelectual incomparavelmente mais evoluído do que as classes preponderantes locais', ANDRADE DE GOUVEIA, *Garcia d'Orta e Amato Lusitano no século de seu tempo*, (1985), 69. That said, Europe's first Ayurvedic hospital has just opened in Lisbon in November 2009, Portugal and the European spice trade, 1480-1580

have preferred recourse to the authority of ancient Arab writers when he was unable to cure a particular ailment than consult local doctors. Although he cites the name of the product in question in the local language, he at no point seems to have entered into the Asian languages of medical theory and practice. Thus, if he waxed lyrical about the bezoar stone, and describes its frequent use in indigenous medicine and means of preparation there, he rationalises its use, amongst others, for ‘melancholic ailments’ (*enfermidades melancólicas*), a thoroughly classical theoretical construction and probably gleaned from Arab authorities who mentioned the stone. Elsewhere, he comments on the Indian obtuseness in failing to distinguish cassia lignea from true cinnamon and ridiculises their ascription of cold properties to black pepper (‘A thing to laugh at rather than to treat seriously’).¹⁰³ We can observe much the same phenomenon in the New World, where the Spanish physician Hernández experimented with Indian herbal remedies on patients in Mexican hospitals but remained contemptuous of native medical dogma.¹⁰⁴ Botanists working in Europe, however, only shared Orta’s prejudices without being able to profit from his knowledge. Gerard, for example, speaks disparagingly of Indian physicians as ‘Empirickes’.¹⁰⁵ Other observers, such as Sasseti, complain that no distinction was drawn in India between a spice merchant (*spetiale*) and a physician (*medico*).¹⁰⁶

There were, admittedly, a few exceptions in which indigenous Indian medicine did impinge upon European practices. China root (*Smilax china, L.*) was avidly sought after, and used to treat Emperor Charles V, after it was discovered from Chinese traders active at Goa around 1535 to have been used to relieve venereal diseases.¹⁰⁷ A number of novel metallic drugs such as tutty were taken from the wider world after Georg Agricola, the father of mineralogy, enlisted scholars, merchants and miners to systematically bring him samples of

London and has been deluged by ten thousand calls within the first two weeks of operation, Gina GONZALEZ, ‘Fate gli indiani’, in *News. Alimentazione, Salute, Tempo Libero, Per una Scelta di Qualità*, Club Magazine for Esselunga S.p.A., no. 5, Maggio 2001, 23.

¹⁰³ ORTA, *Colloquies on the Simples and Drugs of India*, 4-5, 46.

¹⁰⁴ Jonathan D. SAUER, ‘Changing Perception and Exploitation of New World Plants in Europe, 1492-1800’, in Fredi CHIAPPELLI ed., *First Images of America*, Berkeley: U.C. Press, (1976), vol. 2, 818-9.

¹⁰⁵ GERARD, *The Third Booke of the Historie of Plants*, (1597), 1357.

¹⁰⁶ letter of Filippo SASSETTI to Francesco I de’ MEDICI, ‘Avvisi et varie Scritture di Spagna. anno 1545 a tutto l’anno 1589’ - XX, Archivi Generali Toscani.

¹⁰⁷ see Andrea VESALIUS, *Epistola rationem, modumque propinandi radicis Chymae decocti, quo nuper in Indis insulae Ceylan 200mpetragalus in Europa (1546)*, 1480-1580
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unknown metals and minerals from overseas.¹⁰⁸ Orta describes how Indian doctors made use of some of these materials. And there is a considerable body of literature that has investigated Indian influences on Paracelsus' thought, particularly as regards 'magick' and the occult arts.¹⁰⁹

The Dutch, perhaps, allowed for a greater transference of medical knowledge from their host societies. Van Rhee de tot Drakenstein's exhaustive twelve volume botanical encyclopaedia *Hortus indicus malabaricus, continens regioni malabarici apud Indos celeberrimi omnis generis plantas rariores*, published in Amsterdam 1678-93 (1703), was supervised by Konkani speaking doctors, and Rhee de used their therapeutic indications for each plant.¹¹⁰

We might conclude, then, that the medical practices of the wider world had minimal impact upon the European tradition. We might, rather, consider the changes brought about by the new, Paracelsian science of 'Chemiatrie', which had re-interpreted the essence of the body and its ailments as chemical and which called, as a consequence, for a new pharmacopeia concerned with inorganic substances. What followed, as discussed in section 10.4., was a vast swelling of available pharmacological ingredients at the disposal of the practising pharmacist, an addition rather than a substitution to the classical pharmacopeia. And this did not contribute to the de-mystification of spices as vegetal aromata *per se*, even if the mystique migrated from the world of plants to the mineral products of the underworld, just as later they migrated to the chemical world. We can note some alterations to the prevailing Galenic orthodoxy: disease was held to be a localised abnormality rather than a generalised imbalance of humours, for example; it was posited that for each illness there was a specific remedy; and rather than the notion of contraries, 'chemical philosophie' held that like cured like, that is, a doctrine of similarities.

But this amounts to variations on a theme - the *archaeus* was little more than the *spirito vitale*, and the *Tria Prima* a more convincing and singular substitution of the Aristotelian elements, for a long time in shaky dialectic with Galenic humoral theory. Galenism, itself, as we have seen abundantly from medical prescription, was not overturned.

¹⁰⁸ a remark made in his *De natura fossilium*. with comments in E. HERLITZINS, *Georgius Agricola (1494-1555)*, Berlin (1960), 62, 94.

¹⁰⁹ see comments by D. LACH, § 'Technology and the Natural Sciences', *Asia in the making of Europe*, 423-425 and relevant footnotes.

¹¹⁰ see M.J. SINKS, *Indisch Natuuronderzoek*, Kolonial Instituut te Amsterdam, Mededeeling, n. 6, Afdeeling Handelsmuseum, 2, (Amsterdam, 1915), 14-24.
Handwritten note: van Rhee de tot Drakenstein, Portugal and the European spice trade, 1480-1580
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Even in the concrete, such as human anatomy, where Galen was repeatedly contradicted on observational detail, his overall conception of the functioning of the body stood very much intact. And even where significant scientific breakthroughs were made - Robert Boyle's (1627-91) replacement of the old Aristotelian theory of the four elements with the fundamental concept of an element as a substance which cannot be decomposed into simpler ones (one of the bases of modern chemistry), or the optical revolution and the first glimpses of the micro-organic world witnessed in Robert Hooke's *Micrographia* (1665) - their revolutionary implications were not fully acted upon. Pharmacopeias merely shifted their attentions in great credulity to 'alternative' treatments, either the prescription of mineral-based drugs in the Paracelsian tradition, 'abominations' in accordance with occultism, or, more classically, purgings and blood-letting. The boundaries between these different pharmacopeia were often smudged. Thomas Willis, the leading seventeenth century English iatrochemist and Professor of Natural Philosophy at Oxford, noted that many physicians and patients used a number of remedies simultaneously.

But there is plenty of evidence to suggest that classical medicines such as theriac continued to be administered through the eighteenth century, as we can deduce from extant ceramic medicine jars, even if hundreds of listed compounded remedies had become chiefly of historical rather than therapeutic importance.¹¹¹ One of the first explicit disavowals of classical medicine *per se* that I have come across is that of Dr. William Heberden, entitled *Antitheriaca, Essays on Mithridatum and Theriac* and published in 1745. Then, in the official pharmacopeia of the following year, the reader was informed that:

It would be a disgrace and a merited reproach to us if our Pharmacopeia abounded any longer in discordant and random mixtures introduced by primitive ignorance..Relying on the futile hope of devising compound antidotes designed in their individual elements to check the action of any kind of poison. they added to the mass everything which they imagined resisted the infection. .

The pharmacopeia emerged radically purged, for which the Royal College of Physicians in London boastfully considered itself 'to be the first medical society in Europe which shall have duly undertaken this reformation', but it was not until the Pharmacopœia of 1788 that theriac was finally omitted. With the acceptance of the chemical theories of Lavoisier (1743-94), such 'purifications' became more general though, according to Smith's *Dictionary of Antiquities*, Galene, together with its vipers, appeared in the German Pharmacopeia of 1872 and was even

¹¹¹ see Robert JAMES, *Medical Dictionary*, 3 vols, London (1743-45).
Halikowski, *Antiquities* (2004), *Pharmacopœia in the European space*, ed. by Halikowski, London (2004)

included in the French one of 1884.¹¹²

We must conclude, then, that if the botanical knowledge of spices was greatly improved through contact with the areas of their cultivation, the system of knowledge that ascribed their medicinal values and established the framework of their application, that is to say in essence the Galenic system of qualities and humours, remained largely unchanged until the arrival of modern chemical medicine in the nineteenth century, which brought in its train new theories as to the functioning of the human body and new subjects of investigation. Here, I shall contend, lay the ultimate level of demystification, one that promptly swept away the relevance of the objects themselves for their inner chemical constituents. It needed the investigations of localised changes at the micro-organic level and the advancing technics of microscopy during the first half of the nineteenth century to effect this fully fledged paradigm shift to the scientific standards of our age, the foundation of cellular pathology and its revelation that the point of onslaught of disease in the organism are not the organs in general, but the cells.¹¹³ The dynamic impetus towards bacteriology and immunology fuelled by the great discoveries of Pasteur and Koch and the more generic interest in mapping the chemical world, revealed the actions of particular chemical substances upon particular cells and tissues. Modern pharmacology, as a consequence, is taken to have begun with the laboratory of Rudolph Bucheim (1820-1879) in Dorpat where, together with his student O. Schmiedeberg, Bucheim forged an experimental approach still integral to today's preclinical trials.¹¹⁴ Medical botany was henceforth at the service of the chemical through the introduction of new techniques such as the use of stains (both natural and artificial), cleaving, disintegration and new mountants; despite a rarified contingent of botanists like Daniel Hanbury who continued to work on the effects of drugs in the macroscopic domain, it was no longer the individual plants that counted but their individual chemical constituents. Caffeine was successfully prepared from coffee by Runge and Pelletier in 1820; nicotine was extracted from tobacco by Posselt and Reimann in 1828; the first carotinoid pigment was achieved from carrots by Wackenroder in 1831, etc.¹¹⁵

¹¹² cited by Gilbert WATSON, *Theriac and Mithridatum. A Study in Therapeutics* (1966), 142-. The Venetian pharmacy Testa d'Oro produced theriac, though no longer under civic commission, until the 1850s, *Per una storia della farmacia...*, 95.

¹¹³ crowned by the work of Rudolf VIRCHOW (1821-1902), in H.E. SIGERIST, *Great Doctors. A biographical history of medicine*, trans. by Eden & Cedar Paul, London: G. Allen & Unwin, (1933), 343-.

¹¹⁴ J. WORTH ESTES, *Dictionary of Protopharmacology. Therapeutic Practices. 1700-1850*, (1990), vii; the *Brockhaus Enzyklopedie* accredits Bucheim with elevating pharmacology to an autonomous experimental science (*selbstständige experimentelle Wissenschaft*).

¹¹⁵ TREASE *Pharmacy in History*, Tindall & Cox: London, (1964), 169 ff.
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The fuller appreciation of the chemical universe had a major impact on the consumption of aromatics. First, it disproved the therapeutic or sanitary effects of the traditional aromatic fumigations, so that by the time of the *Codex des médicaments ou pharmacopée française* published by Hallé in 1818, they no longer figure. Second, it revolutionised the art of perfumery by the search to isolate and duplicate perfume specifics - once Kekulé had shown how to conceptualise the more complex aromatic compounds by 'closing the ring' on the molecular chain in a famous paper of 1865 - for industrial purposes. Nitrobenzene was used briefly as a substitute for almond oil, though increasingly considered too toxic and crude in odour. The first important successful synthetic was coumarin, with its sweet, woody, hay-like odour, prepared in 1863 by the British chemist Sir William Henry Perkin. In 1876, the German chemist Ferdinand Tiemann duplicated vanillin from the synthetic guaiacol. This was followed by many further synthetizations - most importantly, perhaps, the synthetic musks called musk xylene, ambrette and ketone - not always replicating scents occurring in nature, but also inventing fragrances previously unknown to man. The first of such materials, ionone, was prepared by Tiemann and Paul Kruger in 1893. We might suggest that the possibilities engendered by these experiments decoupled aromatic plants, not to speak of spices, from their historical role in the production of scent.

Today, few people could put a finger on the botanical origins of aspirin (acetylsalicylic acid), probably the single most popular medicine of our times since its launch in 1899, and an extract from a member of the willow (*Salix*) species. We might suggest, then, that not just spices but plants themselves were well and truly demystified from the marvellous virtues they were once ascribed. The mystique had migrated to the realm of chemical therapies, for the most part synthetic but even when naturally occurring, disjunct and alienated from the plant, mineral or animal that produced it.¹¹⁶ As Montaigne had perhaps foreseen three hundred years earlier:

We neede not goe to cull out miracles and chuse strange difficulties: me seemeth, that amongst those thing we ordinarily see, there are much incomprehensible rarities, as they exceed all difficulties of miracles.¹¹⁷

¹¹⁶ That said, in recent decades there seems to be a swing back to searching for naturally occurring medicines. See, for example, Chi-Tang HO, OSAWA, HUANG & ROSEN, *Food phytochemicals for cancer prevention: teas, spices and herbs*, American Chemical Society (1993).

¹¹⁷ MONTAIGNE. Michel de, *The Essayes of Michael Lord of Montaigne*, trans. John Florio, London (1892).
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10. THE EUROPEAN MARKET.

If not strictly adhering to a part of this thesis consecrated to demand, the purpose of Chapter 10 is to take a step back and look at the economic realities of the spice trade impersonally, from a distance, with no reference to actors and their respective strategies and relationships. Thus we shall start in the realm of volumes of European supply and price movements. From here we shall proceed to investigate how the market was structured, principally along the lines of two important differends: the play between Asiatic and African spices (which seemed to offer much the same tastes, and yet very different prices), and the play between Venetian and Portuguese products, which were of significantly different qualities. And finally, we shall describe the apparent dynamics within the European market for spices by which traditional spices suffered a considerable loss of fortunes with a view to mapping the theory elaborated in Chapters 8 and 9 - that spices were long-standing mystified goods that fell victim to demystification in roughly three successive steps - on to the realities of the spice trade.

10.1. Volumes of supply.

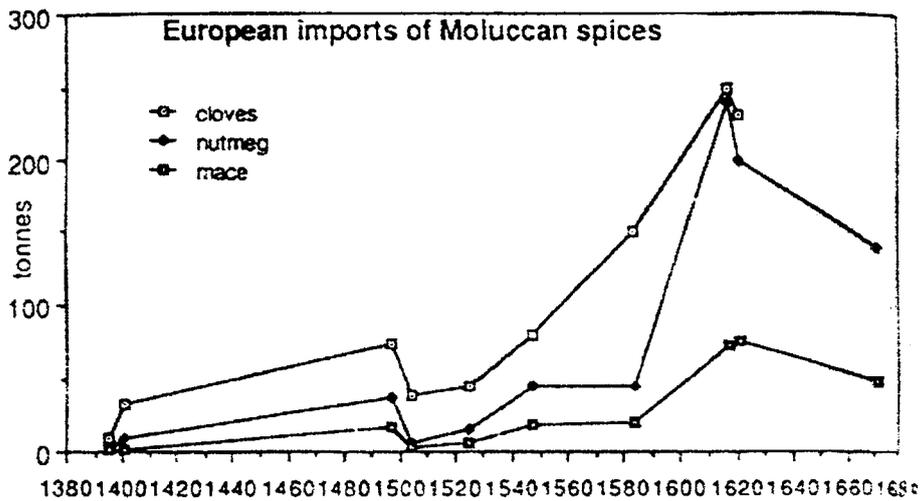
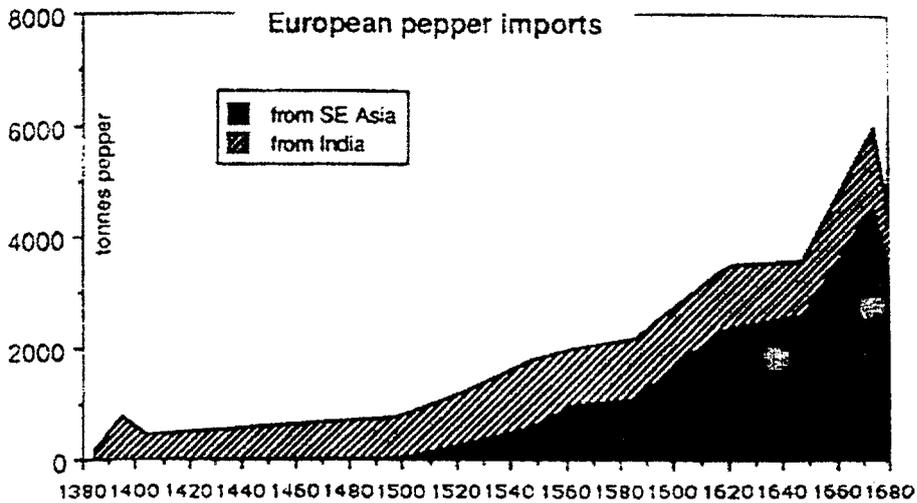
We have already considered the quantities of oriental spices imported by the Portuguese in an earlier section. How does this relate to the overall volume of such products arriving on the European market, and their respective price movements over the course of the sixteenth century? One might choose to phrase this otherwise: what was the impact of the Portuguese trade on the European consumer in the light of the aggregate demand dynamic for oriental products on the European market?

The concensus is that the European market doubled over the sixteenth century from its initial market share of roughly 2500 metric tons, in line with global production, and enlarged still further over the seventeenth, even if the Portuguese share in this supply had substantially shrunk by this time and attentions were shifting to other goods that were enjoying a swifter rate of growth in demand.¹ Holden Furber provides more specific figures. He has contended that during the first half of the seventeenth century, European demand for pepper stood at approximately 7 million pounds wt. (3175 metric tons), of which the Portuguese provided 1.4 million, the Dutch 3 million and the English 2.6 million pounds. In

¹ Armando CASTRO, *História Económica de Portugal*, vol III, 108; WAKE, cited by PEARSON, M.N., ed. *Spices in the Indian Ocean World*, xxix; the size of the European market is estimated by H. KELLENBENZ, Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580, *Wirtschaftliche Aspekte der überseeischen Expansion Portugals*, in: *Scripita Mercaturae*, 2, (1970), 16. DOI: 10.2870/92585



Graph 2. European imports of pepper and Moluccan spices, 1380-1680.



Source: Anthony REID, 'The System of Trade and Shipping in Maritime South and South-East Asia, and the Effects of the Development of the Cape Route to Europe', Figs. 1 & 2.5 in POHL, Hans (ed.), *The European Discovery of the World and its Economic Effects on Pre-Industrial Societies, 1500-1800. Papers of the 10th International Economic History Congress, Stuttgart. (1990).*



1650, the aggregate had subsided a little, the English taking 500.000 pounds while the Dutch 4-5 m. lbs. In 1670, however, Dutch imports alone stood at a record 9.2 million pounds.² Even thereafter, despite the unreasoned sharp drop immediately following this date appearing on Anthony Reid's schema of European pepper imports (see Graph 2), the indications are that pepper imports continued on their way of slow, sustained growth after the 1680s and on through the eighteenth century.³ This trend was only reinforced by the further price falls consequent to the American free traders' success in undermining the Dutch and English East India's position in the trade in the late eighteenth century.⁴ By 1872, 27,756,710 lbs were imported into the U.K. - 25 million pounds from the Straits settlements, while only 256,000 pounds from British India. Almost 18 million pounds were re-exported to continental Europe.⁵ Today, imports into Europe figure at 152,078,920 pounds (68,983 metric tonnes), and, if we subtract exports to arrive at something approaching consumption, 120,551,140 lbs (54,682 tonnes).⁶

Demystification, then, in broad sketch strokes, would not seem to have led to a protracted absolute volumetric decline. To be fair, to be better understood demand must still be calibrated to European demographic statistics, and in the following section, to prices and to real wage dynamics. As regards the former, Mauruschat has proceeded from the European population estimate of 70 million people during the sixteenth century; Elliott specifies a dynamic that carried the total size of the European population from perhaps 50 or 60 million

² FURBER, *Rival Empires of Trade in the Orient, 1600-1800*, (Minneapolis, 1976), 236.

³ C.H.H. WAKE. 'The Changing Pattern of Europe's Pepper and Spice Imports, c. 1400-1700', 394 from inventories of the E.I.C. and the V.O.C. See W.A. HORST, 'De peperhandel van de Vereenigde Oost-Indische Compagnie', *Bijdragen voor Vaderlandsche Geschiedenis en Oudheidkunde*, 8th series. vol. 3 (1942), pp. 95-103 and Bal KRISHNA, *Commercial Relations between India and England (1601 to 1757)*, which gives figures for the EIC's imports between 1698 and 1760.

Consumption based statistics for the eighteenth century are a little less upbeat, mirroring perhaps the invective surrounding the question of taste which we shall investigate in section 10.6. Thus, for example, while the Hanse memorandum regarding the European distribution of pepper estimated the Flemish market at approx. 2000 quintals (117,500 kg) in 1611, average annual consumption between 1759-91 for the whole of the Austrian Low Countries was only 100,000 kg, see Raymond VAN UYTVEN, 'Herbes et Épices dans les villes des Pays-Bas du Sud', in *C.G.E.R.*, (1992), Table 4, 87.

⁴ WAKE; see also John BASTIN, *The Changing Balance of the Early Southeast Asian Pepper Trade*, Kuala Lumpur (1960) and J.W. GOULD, 'Sumatra - America's Pepperpot, 1784-1873', *Essex Institute Historical Collections*, vol. 92, (1956).

⁵ *Annual Statement of the trade of the U.K. for 1872*, reported by FLÜCKIGER & HANBURY, *Pharmacographia* .., (1874).

⁶ F.A.O. *Trade, Commerce, Statistical Synopsis* (1994), Table 79.
Mark Rowland, *Portugal and the European spice trade, 1480-1580*
 European University Institute

around the mid-fifteenth century to around 90 million people at the end of the sixteenth.⁷ But by these estimations, and those of the O.E.C.D. for Europe of today, we can still estimate that pepper consumption per capita, which was around 50 grams per head in sixteenth century Europe, has doubled if not tripled.⁸

Mauruschat, using more conservative estimates of European pepper imports, presents a somewhat more nuanced picture in which the per capita consumption of pepper fell from 20-25 grams p.c. around 1500, to between 17-21 g around 1600, to as little as between 16-18 g around 1800.⁹ Here, then, we have evidence of decline. But the picture regarding the consumption of fine spices from the Moluccas is a very different one, for their imports rose more dramatically than pepper in the wake of the Discoveries. C.H.H. Wake has estimated that the European market grew as much as 500% between 1500 and 1620. This has been calculated on the assumption that Venetian imports constituted 75% of the total in the 1490s, so that the European market was about 410.000 l. s. (250.000 pond) at that time; while, before the effects of the Thirty Years War made themselves felt, the V.O.C. estimated the market at the equivalent of about 1.4 to 1.5 million pond and aimed to import around 1.26 million pond in the years 1615-17.¹⁰

In summary conclusion, while the long-term growth rate for pepper consumption was generally sustained, that of fine spices was spectacular. A commodities bulletin released by the F.A.O. in 1962 suggested that world pepper consumption had slipped some 20% since the Second World War (we might more meaningfully suggest decolonisation) and in most European countries had fallen by as much as half.¹¹ Could it be that 'the decline in spices' was a retrospective historiographical projection of a society in which consumption really was declining? In our economic account of the decline of spices, we will have to search for that decline largely as a relative rather than an absolute phenomenon.

10.2. Price movements.

⁷ J.H. ELLIOTT, 'Demographic estimates', *Europe Divided, 1559-1598*, 64.

⁸ *OECD Main Economic Indicators*, (December, 1993).

⁹ H. MAURUSCHAT, *Gewürze, Zucker und Salz im vorindustriellen Europa. Eine preisgeschichtliche Untersuchung*, Göttingen (1975), Tabelle XXIII, 'Etappen der europäischen Zucker- und Pfefferversorgung, 1500-1800', 176.

¹⁰ WAKE, *The Changing Pattern of Europe's Pepper and Spice Imports*, 393-4. The VOC forecasts are taken from COLENBRANDER, *Coen*, vol. 4, 321-22, 452.

The intention here is to assess the vicissitudes in the spice trade both generally and specifically in the light of variegated price movements at a number of major European markets. Charting the general evolution of prices will help to clarify what we mean by the 'decline of the spice trade' and its metrics, while it may be opportune more specifically to see whether the collapse of the Crown Feitoria in Antwerp may have been provoked by collapsing prices. Further to this, might price movements be able to tell us anything about the paradigm shifts in Portuguese trading policy and their timing? I have tended to rely on published price series for Antwerp, Frankfurt am Main, Klosterneuburg in Austria, Valencia and England; some of these have been included in the best synthesis of the topic, Hans Heinrich Mauruschat's doctoral thesis *Gewürze, Zucker und Salz im vorindustriellen Europa. Eine preisgeschichtliche Untersuchung*, submitted at Göttingen in 1975. Many of these series, however, are incomplete; the regular printing of civic lists stipulating the price of retail sale commenced, in the Venetian case as in most others, only in 1565, even if the stipulations, in the case of papal Rome, went back to 1429, and are known in at least ten German cities before 1500.

The first returns from the Vasco da Gama cargo were enormous. If we can believe Correia, a quintal of pepper fetched as much as 80 cruzados, nutmeg 100, ginger 120, cinnamon 180 and mace 300.¹² With the institution of regular deliveries courtesy of the Carreira das Índias prices climbed down to more reasonable levels, and from around 1503 even slumped. The declaration of January 1, 1505 seems to have been prompted by the sudden collapse of spice prices, both at Lisbon, where the price plummeted from 40 ducats to 20, but even more markedly at Antwerp, where prices fell precipitously from 55 Brabanter groschen to 20 in June, 1505 and to 18½ in October. They seem to have recovered only very slowly; for example, the price remained around 24 Brabanter Groschen until 1513.¹³ Such a fall was mirrored by the price of malagueta on the Antwerp market, which fell from 12 to 6 dinheiros a pound between roughly 1503 and 1512.¹⁴ Prices of cinnamon at Cairo, which

¹² Gaspar CORREIA, *Lendas da Índia*, ed. Rodrigo de Lima Felner, Lisboa (1859-66), t. I, pte. I, 142 ff.

¹³ VAN DER WEE, *The Growth of Antwerp Market...*, III, Graphik 27, in conjunction with Table 26/1, p. 309 in vol. II. See also the overview by VAN KLAVEREN, *Economic History*, 111 ff. The information is juxtaposed with prices cited by QUIRINI, albeit in Flemish gros per pound. Is a Flemish gros = a Brabanter groschen? Reference to *Calendar of State Papers: Colonial Series, 1513-1616*, repr. Vaduz, Kraus reprint (1964), pp. 301, 307. Are the dates ascribed Quirini's observations accurate? RAWDON BROWN believes these figures to have been taken by Quirini from Antwerp's autumn fair in 1508 (pepper at 18.5 groats/pound; ginger 17-24; cloves 60; cinnamon 28-30; nutmegs 28), (*The Calendar of State Papers and Manuscripts relating to English affairs existing in the Archives and Collections of Venice etc.*, I, no. 857 et al. missives.

¹⁴ Halikowski-Smith, Stefan (2001), *Portugal and the European spice trade 1480-1580*, Lisbon (1947), 77-78.
 European University Institute DOI: 10.2870/92585

had hovered around 60-75 ducats per quintal between 1497 and 1502, fell to 33 ducats in 1516.¹⁵ The market for sugar was equally saturated; a cargo of Canarian sugar that arrived in Antwerp could not even be sold at 3 groats a pound in 1508.¹⁶ Consequently, there seems every reason to suggest that the change in trading policy surrounding the 1505 decree and the moves towards the activation of the Crown monopoly rights were based upon price movements on the international markets.

The Portuguese held to the fixed price (at least for pepper) established by the Casa da India at 22 cruzados/quintal until at least 1512 and probably until 1514.¹⁷ According to Lucas Rem, the King subsequently raised the Lisbon sales price from 24.5 to 26.25 cruzados in October 1517, in 1518 up to 28.25, in 1519 to 32.25 and finally in 1520 up to 34.25 cruzados/quintal.¹⁸ These price hikes were immediately reflected on the European market, as we can see from Graph 3, particularly the series from Klosterneuburg in Vienna where prices picked up from a nadir of 27.1 (currency) in 1514, to 33.8 in 1517, to 43.9 in 1520.

A preliminary assessment of the European market for spices during the first half of the sixteenth century, then, would suggest a very high degree of similarity in price movements between the various trading centres of Europe, an 'astonishingly great price parallelism' (*erstaunlich große Preis Parallelität*) in Mauruschat's words, and which holds equally for eastern Europe.¹⁹ In this sense, we would be inclined, then, to overlook Werner Sombart's caution as to the 'disarray of spatial and chronological conjunctures' (*räumlich und zeitlichen Durcheinander Konjunkturen*) in early modern capitalism, and conclude that a European

¹⁵ GODINHO, *Os descobrimentos e a economia mundial*, vol. II, 121, citing data from Girolamo Priuli and Manuel Sanudo.

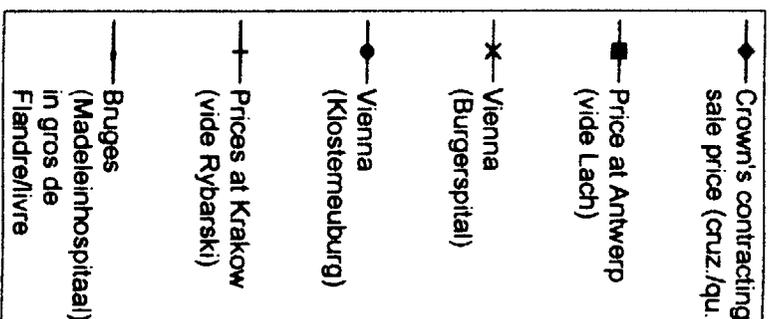
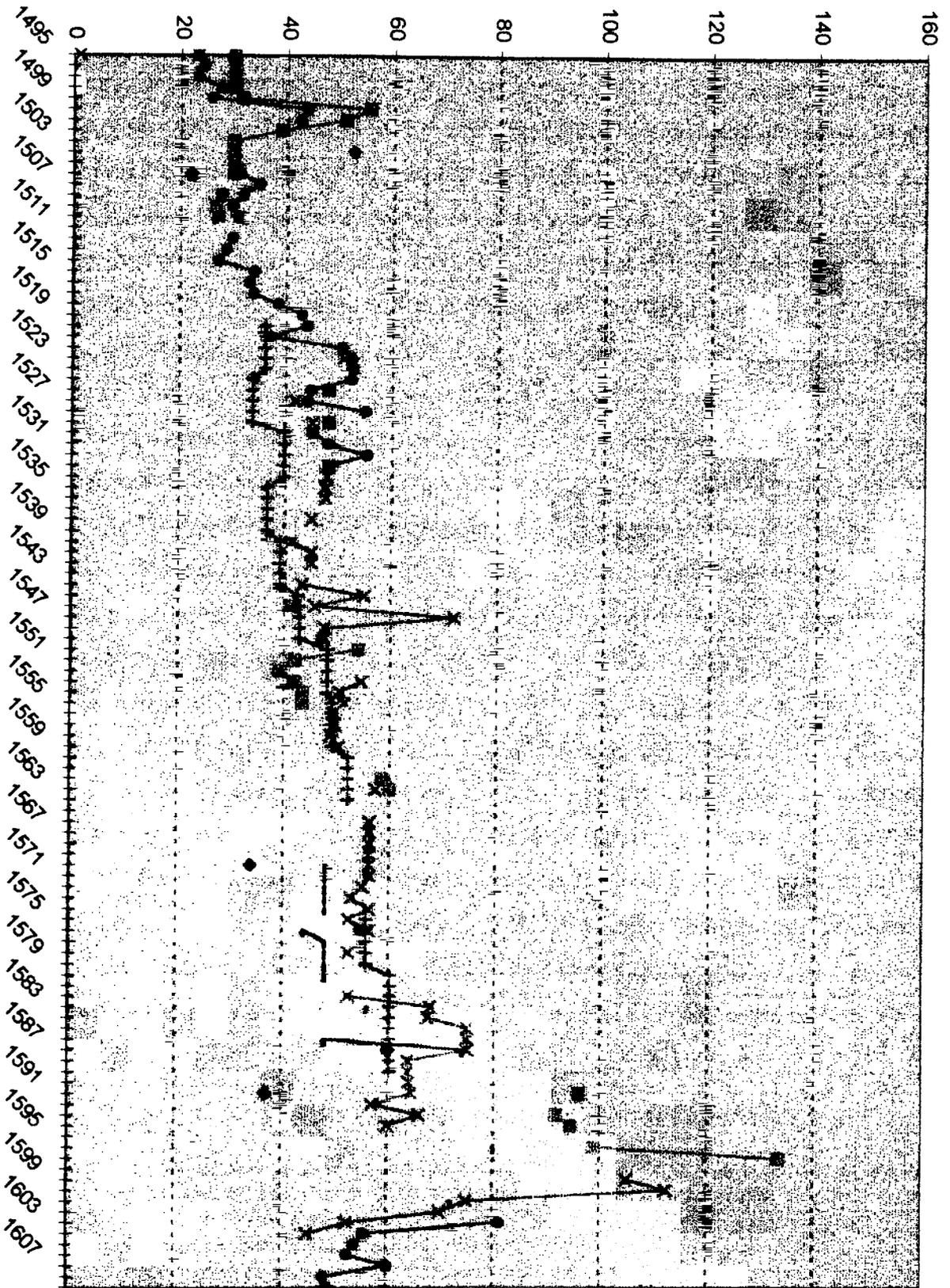
¹⁶ J. WEGG, *Antwerp, 1477-1559*, 179 relaying information from J. REYGERSBERGH's *Dye Cronijcke van Zeelandt*, Antwerp (1551), lvii.

¹⁷ For 1505, QUIRINI, in *Le Relazioni degli ambasciatori veneti*, 13 and SANUTO, *I Diarii*, tom. VI, col. 384; for 1512, *Cartas*, tom. V, 505, 508; a fixed price of 22 cruz./qu. was agreed in a contract with the Affaitadi that ran until 1514, Chanc. de D. Manuel, liv. XLVI, fl. 155v. The price of cinnamon, on the other hand, was quick to appreciate; already three months after fixed prices of sale had been established in 1505, the Crown's asking price had already inflated by 60% (see the terms of the Marchionni contract, Chanceleria de D. Manuel, Livro 46, fl. 130v-131r).

¹⁸ *Tagebuch des Lucas Rem*, ed. Greiff, 26.

¹⁹ Heinrich MAURUSCHAT, *Gewürze, Zucker und Salz im vorindustriellen Europa. Eine preisgeschichtliche Untersuchung*, Göttingen (1975), 71; S. HOSZOWSKI, 'L'Europe centrale devant la révolution des prix aux XVIIe et XVIIIe siècles', *Annales: Économies, Sociétés, Civilisations*, Vol. 16, No. 1, Paris (1961), 451; *ibid.*, 'The Revolution of Prices in Poland in the 16th and 17th Centuries', *Acta Poloniae Historica*, Vol. II, Warszawa (1959), 7-18.
Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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Graph 3. Nominal European Pepper Prices, 1495-1610





market for spices genuinely existed.²⁰

We can confirm, specifically, that across our time-sample prices were increasing. Work by Ashtor and Lane at Venice and Alexandria has overturned the traditional argument for eastwards exploration couched on an increase in the price of oriental spices during the century prior to the Discoveries; it was only after 1498 that a rise of prices - and a steady one at that - can be perceived.²¹ By how much did spice prices rise? The Diet of Nuremberg in 1522 considered the inflationary tendencies of the central European market for spices carefully in the middle of a barrage of popular protests and denunciations at rising prices.²² Ten years later, the Baers report of May 1534 concluded that 'Prior to the stated monopoly, one was accustomed to have such spices for half the price one does currently'.²³ In fact, one can detect that the Portuguese cut the volume of spices that they were importing in order, most probably, so as to keep the asking price high. Rothermund would venture another explanation: in his opinion, the steady rise of prices alongside a doubling of volume over the course of the century amounts to demand inelasticity - people kept buying with relatively little attention to the price. This then, is the opposite of what happened to sugar, whose price was driven down to a third of what it once had been on the markets of Antwerp and Venice in 1490.²⁴

Some spices, of course, rose in price more markedly than others. Pepper, according to Gaspar Correia, tripled in price between 1520 and 1560, while ginger rose five-fold between the first and last quarter of the sixteenth century, and cloves as much as six or seven times.²⁵ If ginger was once cheaper than pepper, with the Discoveries it became 50% more valuable. English price series suggest pepper prices rose around 35% between 1521-40, over 40% for cloves and up to 90% and over on mace. Cinnamon and dates acquired least value,

²⁰ Werner SOMBART, *Der moderne Kapitalismus*, Bd. II, 1, München und Leipzig (1928), 225.

²¹ E. ASHTOR, 'La découverte de la voie maritime aux Indes et les prix des épices', in *Mélanges en l'honneur de Fernand Braudel*, Toulouse (1973), I, 31-38, developed as 'Spice Prices in the Near East in the 15th century' *Journal of the Asiatic Society*, London (1976); F. LANE, 'Pepper Prices Before Da Gama', *The Journal of Economic History*, New York, 28, (1968), 590-597.

²² ERASMUS in a scathing dedication to his Chrysostomi Lucubrations that was never published complains how 'le prix des denrées n'a pourtant pas baissé, mais au contraire considérablement augmenté', in M. BATAILLON, 'Erasmus et la Cour de Portugal', separata do *Arquivo de história e bibliog.*, vol. II, Coimbra (1927), 21. The Pope issued a brief of 9 April 1524 formally asking King João III to lower prices since 'ad nos et ad sedem apostolicum quotidie veniant querelae, nec jam singulatim, sed populariter implorantium', *Corpo diplomático português*, t. II, 210.

²³ 'Auparavant le dit monopole, l'on souloit avoir lesdites especeries la moitié meilleur marché que l'on a à présent', Baers' letter reproduced in *Antwerpsch Archievenblad*, t. VII, 282-5.

²⁴ see E.O. von LIPPMANN, *Geschichte des Zuckers*, 2 ed. Berlin (1929), 720-1.

²⁵ A. CASTRO, 'História Económica de Portugal', vol. II, (1985), 108-1580
 Halikowski-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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hovering around a 25% mark up.²⁶

What about the price movements of spices as compared to other products? Pelc has shown that prices of oriental goods at Cracow followed much the same curve as other goods. A more detailed study on Polish price movements between 1530-90 has demonstrated that the price of pepper rose 79% as oppose to rye 108%, cattle 280%, iron 61% and tissues from the East 61%, at the same time as the currency devalued by around 31%. It seems, then, that colonial goods grew cheaper relative to the grain and livestock prepared for export to the West, a reflection principally of the increase of European purchasing power with respect to foreign goods resultant from the influx of American bullion.²⁷ The price differential between spices and cereals was even more pronounced in western Europe. Zanetti has investigated price rises of selected groups of commodities in Pavia between 1548-80, and has demonstrated that while prices of spices, drugs and dyes rose 43%, foodstuffs rose 86% and metallurgical, mineral and chemical products 81%.²⁸ The situation was similar on the Swedish market in the early modern period, though metals kept pace with spices while other manufactured goods fell behind, an indication of technological progress. If we take prices between 1460-69 as a 100 index, then barley stood at 238 around 1550-59, pepper at 113 and cloves at 117. Industrial staples such as iron and wax stood at 115 and 62 points respectively.²⁹ In any case, Mauruschat demonstrates how price divergences between overseas spices (sugar, pepper and ginger) and staples like salt and wheat massively accelerated from around 1600 (see Graph 4).³⁰

Work on price movements of aggregate 'baskets' of consumer goods at markets like Antwerp would suggest that while nominal prices rose between 5.72-5.91 times between 1495-1600, that of pepper trailed slightly behind at a factor of 5.015. At the same time, the summer daily wages of masons (labourers and journeymen apprentices) at Ghent, since the

²⁶ James E. Thorold ROGERS, *A History of Agriculture and Prices in England*, Oxford, 6 vols. repr. Vaduz (1963), vol. 4, 656.

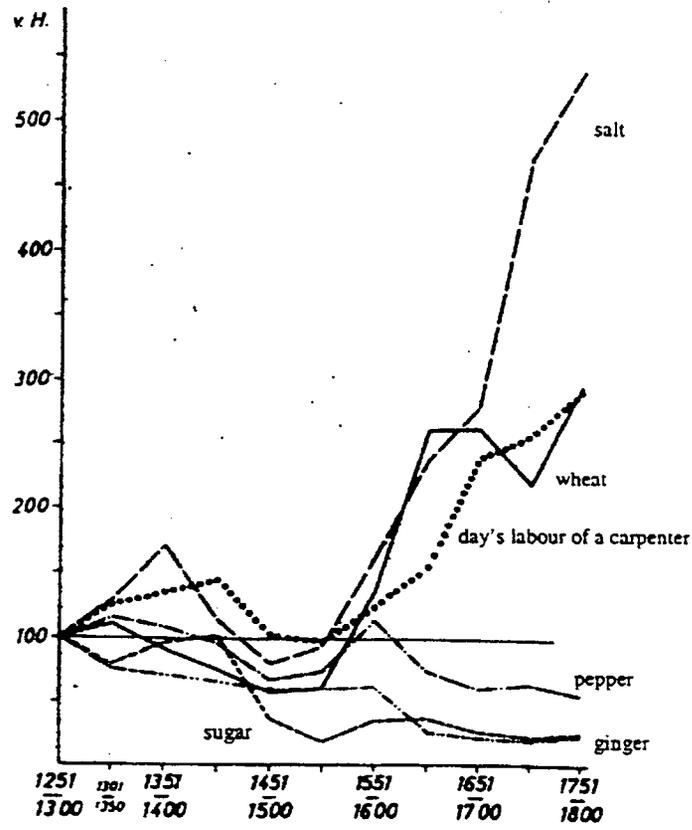
²⁷ M. MAŁOWIST, 'Le commerce du Levant avec l'Europe de l'Est au XVIIe siècle', in *Mélanges en l'honneur de Fernand Braudel*, Toulouse (1973), 353 citing J. PELC, *Ceny w Krakowie w l. 1369-1600*, Lwów (1935). Jan DĄBROWSKI, 'Consequenze economiche delle scoperte geografiche nel territorio dal Baltico al Mar Nero', in *La Pologne au VIIe Congrès International des Sciences Historiques. Société Polonaise d'Histoire*, Warszawa (1933).

²⁸ ZANETTI, 'Note sulla Rivoluzione dei prezzi', *Rivista storica italiana*, vol. 77, (1965), 13.

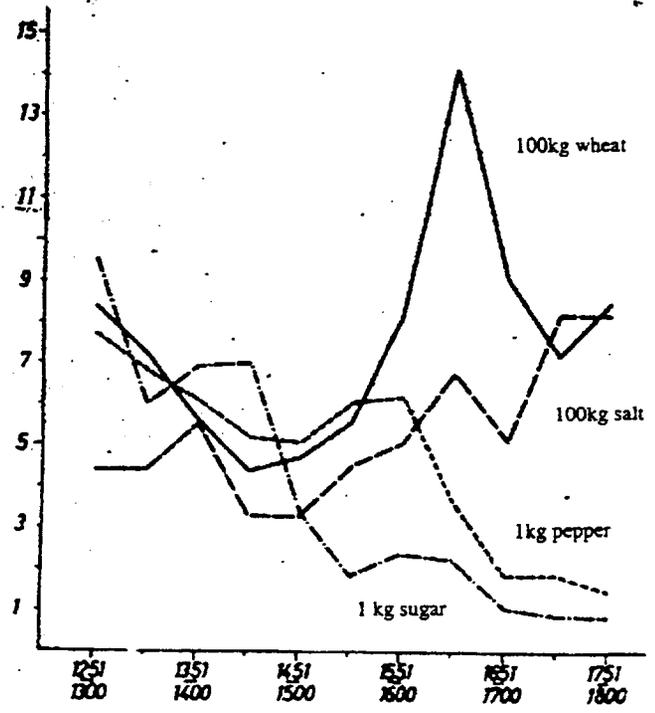
²⁹ I. HAMMARSTRÖM, 'The price revolution of the XVI: some Swedish evidence', *The Scandinavian economic history review*, 5, (1957), 118-54. Cited by B.H. SLICHER VAN BATH, *História Agrária da Europa Ocidental, 1500-1850*, Editorial Presença, (1960), 199.

³⁰ MAURUSCHAT, *Gewürze, Zucker und Salz im vorindustriellen Europa*. .. Schaubild I 'Die langfristige Preisentwicklung in England', (1975).
Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
Preprints of the University of Vienna, (1975).

and staples in England (taking the figures for 1251-1300 as a 100 index, 50 year average, prices in grams of silver). Adapted from MAURUSCHAT, *Gewürze, Zucker und Salz*. (1975), Schaubild I.



Graph 5. Consumer commodity price movements, expressed in number of days' work of an English carpenter between 1251/1300 - 1751/1800 (100 kg wheat, 1 kg pepper, 100 kg salt, 1 kg sugar). Adapted from MAURUSCHAT, *Gewürze, Zucker und Salz*. (1975), Schaubild XXIII.





data for Antwerp does not stretch until 1600, rose 3.27 and 3.166 times respectively. These wage trends are corroborated by work done by Witold Kula, who has suggested that European real wages declined by as much as 50% over the course of the sixteenth century (cf. Graph 5).³¹ So, pepper was becoming a relatively more accessible household commodity even if the times saw a relative decline in domestic incomes when measured against consumer goods.³² Consumption apparently responded to this relative price accessibility; work on the yearly budget of the infirmary of the Béguinage of Lier reveals how, if the average share of spices in the budget of the infirmary stood at 4.5% in 1526, by 1575 it had reached 8.8%.³³

What then of Godinho's cries of crises in the global economy in mid-century, and possible motivations for the closure of the Antwerp Crown feitoria in terms of price perturbances? The price series that one can muster, interrupted and incomplete as they are, tell different stories. Certainly one should not look to the contract price established by the Crown at Lisbon, and which remained, for political purposes, quite stable at a healthy 34 cruzados/quintal. On the real market, however, the decade between 1545 and 1555 seems to have seen fluctuations on a scale unknown since the period either side of the discovery of the route to the Indies. Between 1543 and 1547, pepper prices at Vienna - and for which we have a continuous series - rose 167%. In other markets, too, such as in England, price rises were particularly steep between 1545-46.³⁴ The rise seems immediately to have been followed by an equally meteoric collapse, with a nadir in Vienna in 1548 and in Antwerp in 1552.³⁵ But the collapse was not one that brought the price of spices down to a level markedly out of synch with pre-fluctuation prices. One would be inclined to look beyond price evidence to more systemic, structural features prompting the closure of the Crown Feitoria in Antwerp.

Prices rose over the second half of the sixteenth century, in New Castile abnormally so, tripling between 1558 and 1565, and public complaints were again heard, in Genoa this

³¹ W. KULA, *Teoria econòmica del sistema feudale*, Turin: Einaudi (1970), trans. as *An Economic Theory of the World System*, New York (1976), 504-5.

³² Herman VAN DER WEE, Figure 5.2. 'Nominal price index for a 'basket' of consumer goods at Antwerp (1400-1600): annual indices and moving inter-quarterly median per 13 years', in 'Trade in the Southern Netherlands, 1493-1587', in *The Low Countries in the Early Modern World*, Aldershot (1993). The wage data from Ghent was collected by E. SCHOLLIERS, 'De lagere klassen. Een kwantitatieve benadering van levensstandaard en levenswijze', in *Antwerpen in de XVIde eeuw*, Antwerp (1975), Table 2, 165.

³³ E. SCHOKKAERT & H. VAN DER WEE, 'A Quantitative Study of Food Consumption in the Low Countries during the Sixteenth Century', *Journal of European Economic History*, vol. 17 (1), 1988, 131-.

³⁴ A.F. PRIBRAM, *Materialien zur Geschichte der Preise und Löhne in Österreich*, Vienna, (1938); vol. I, item 636; P.H. RAMSEY, *The Price Revolution in Sixteenth Century England*, London (1971).

³⁵ for pepper prices in Antwerp, I have used Charles VERLINDEN, *Dokumenten voor de geschiedenis van de prijzen en lonen in Vlaanderen en Brabant (XVe-XVII eeuw)*, Bruges (1959), 332-33. DOI: 10.2870/92585

time.³⁶ These prices held until the beginning of the seventeenth century, when they started to fall. Even towards 1580, pepper prices had fallen 25% off their peak in England, 11% in New Castile and 8% in Vienna. This was the period in which the price differential between pepper and grain made itself felt most clearly.³⁷ Already in 1598 the Conselho de Portugal reported difficulties selling pepper at 80 cruzados/quintal, forewarning that 'everything will be appeased if only the pepper will be sold, and such will be the result if the price is lowered' (*fiquara tudo desemparado, se apimenta, senão Vender, e quasi o mesmo vira a ser, se abater o preço della*).³⁸ Prices of pepper in Lisbon in the period directly preceding the publication of a well known trading treatise in 1607 stood at 50 ducats/quintal, of cloves 75, cinnamon 68 and mace and nutmeg at 80.³⁹ In 1613, pepper sold at Lisbon for 27 crusados, even if it climbed back a little to 40 cruzados/quintal by 1625.⁴⁰ But by that time, Thomas Mun could firmly distinguish 'former' from 'later' price trends, more specifically a drop from 6 to 2 shillings per lb. in the price of pepper, with the end of arguing that spices were no longer a source of profligate national expenditure.⁴¹ Prices of pepper on the Krakow market mirrored the drop elsewhere in Europe, although the city's price curve remained above those of other Polish towns.⁴² Elsewhere in Eastern Europe, Transylvanian records would suggest that prices of pepper, cane sugar and saffron remained stable between 1595 and 1669. But the market here, within the political confines of the Ottoman Empire, was supplied as much by Levantine as by Atlantic sources, which explains why only ginger - a Levantine spice *par excellence* - dropped in price.⁴³

Chaudhuri has concluded that pepper prices fell in Europe by roughly a quarter

³⁶ E.J. HAMILTON, *American treasure*. . . , 232-33; R. di TUCCI, *Relazione*. . . , 639.

³⁷ see appendix and LACH, *Asia in the making of Europe*, 133. Comparative prices can be found in G. WIEBE, *Zur Geschichte der Preis revolution des XVI und XVII Jahrhunderts*, Leipzig (1895), 113.

³⁸ Archivo General de Simancas, A.G.S., Conselho da India, 10 November, 1598. I thank Ignaki Lopez Martin for bringing my attention to this document.

³⁹ *The Merchants Avizo*. . . (1607), 9. By contrast. soap cost 7 duckats/qu. and salt 11 *rials* the *muy*.

⁴⁰ cited by Jacques MERTENS, 'De Bonnes Épices au Bon Poids', in *C.G.E.R.*, 98.

⁴¹ Thomas MUN, *A Discourse of Trade*, London (1621), 43.

⁴² E. TOMASZEWSKI. *Ceny w Krakowie w latach 1601-1795*, Lwów (1934), 66-67; M. HROCH, 'Die Rolle des Zentraleuropäischen Handels im Ausgleich der Handelsbilanz zwischen Ost- und Westeuropa. 1550-1650', in BOG, *Der Aussenhandel Ostmitteleuropas, 1450-1650*, (1971), 12-14.

⁴³ comparison between city accounts of Kolozsvár in 1595, KvSzám 6/XV-XVI, and prices recorded for 1669 in Anna Bornemissza's accounts, see 'Bornemissza Anna gazdasági naplói (1667-1690)', vol. I of Béla Székely, *Anna Bornemissza magyar királyi fejedelem udvartartása*. (Budapest, 1911).

between 1609 and 1626.⁴⁴ This price drop in itself constituted a serious portent that the European market was approaching saturation, particularly if we calibrate it to the wage index and which over the long-term (1251-1800) registers the steepest drop in number of working days needed to purchase a given quantity of pepper for the seventeenth century.⁴⁵ By 1627, Gomes Solis could persuasively protest that the price of sale no longer covered the costs incurred by the Portuguese.⁴⁶

Prices of 'fine spices', by contrast, managed to do particularly well under the Dutch monopoly (see Graph 6). In 1658, for example, the cinnamon price was raised from 15 stuivers to 36, and later to 50.⁴⁷ Cinnamon on the Krakow market rose by as much as five-fold between 1650 and 1700, and in Koloszvár, Transylvania, doubled between 1595 and 1669. Saffron, too, performed exceptionally. But even pepper prices rose steadily from 1650 right through to 1700, if thereafter subject to particularly strong fluctuations.⁴⁸ In Krakow, merchants during the early modern period had difficulty coping with such price vacillations, having to obtain long extensions on credit, which then suffered at the hands of rampant inflation.⁴⁹ To Carter, this goes towards explaining 'why spices in particular and, to a lesser extent, other colonial goods, declined as transit or re-export commodities in the city's commercial structure'.⁵⁰ Here, then, we have one account for the long-term decline of spices based upon price information. But it is not ultimately such a strong one. Violent price fluctuations had always been part of the make-up of the pepper market as the van der Molen correspondence or Margaret Wade Labarge's work on the Countess of Leicester's spice account well illustrates. A distinction, then, needs to be made between fluctuations and

⁴⁴ K.N. CHAUDHURI, *The English East India Company: The Study of an Early Joint-Stock Company, 1600-1640*, (1965), 151.

⁴⁵ MAURUSCHAT, *Gewürze, Zucker und Salz im vorindustriellen Europa*. Schaubild XXIII: 'Anzahl der Tagewerke eines englischen Zimmerers, 1251/1300 - 1751/1800', 173.

⁴⁶ E. Duarte Gomes SOLIS, *Alegación en favor de la Companhia de la India Oriental, commercios ultramarinos, que ne nuevo se instituyó en el Reyno de Portugal*, (1628), f. 2 and V.M. GODINHO *L'économie de l'Empire Portugais aux XVe et XVIe Siècles*, (1969), 831.

⁴⁷ ARASARATHAM, *Merchants, Companies and Commerce*, Delhi (1986), 137.

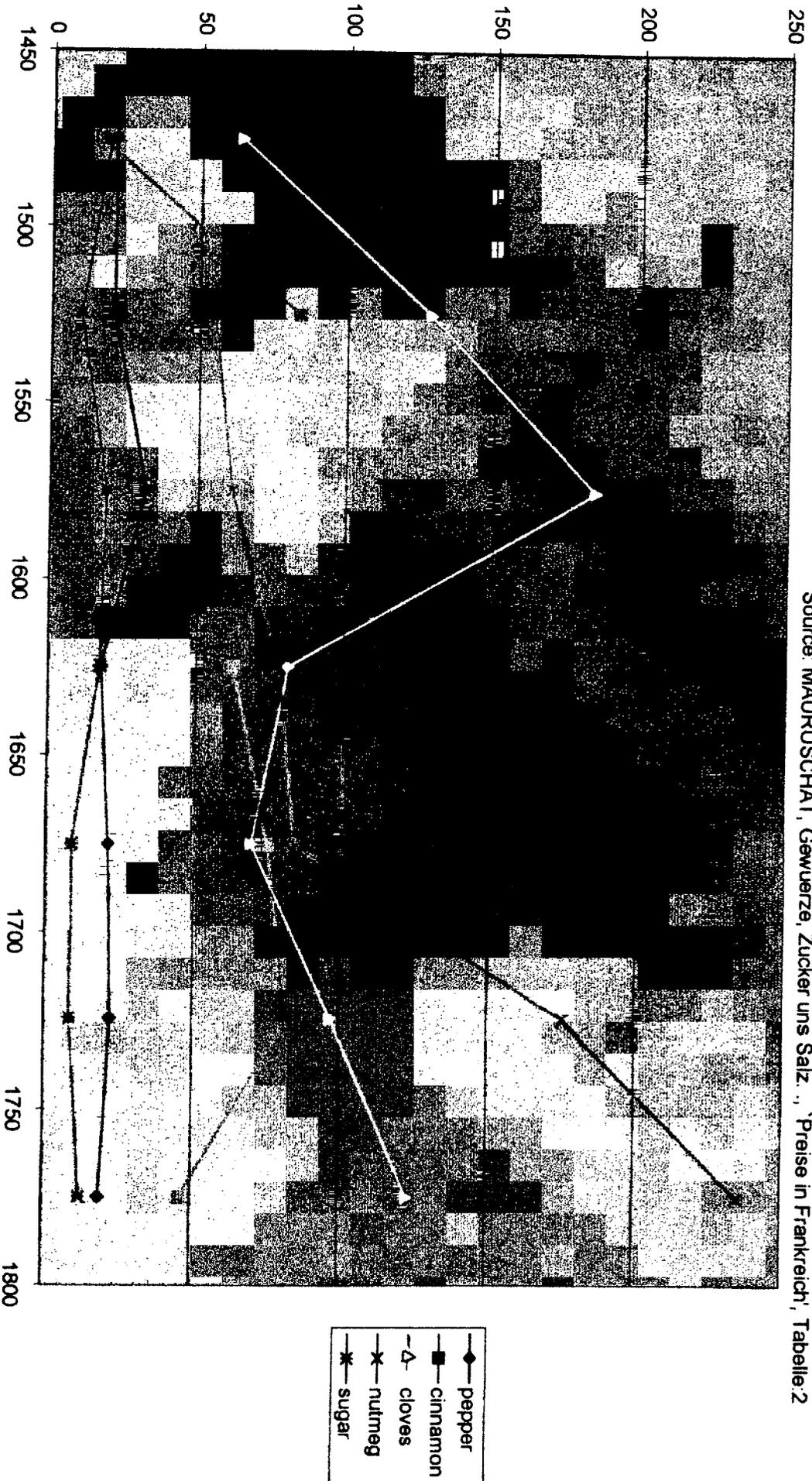
⁴⁸ D.H. PENNINGTON, *Seventeenth Century Europe*, Longmans (1980), 77 and MAURUSCHAT, *Gewürze, Zucker und Salz im vorindustriellen Europa*. Schaubild XIX. 'Pfefferpreise 1601/10-1791/1800', 137.

⁴⁹ see M. BOGUCA, 'The Monetary Crisis of the XVII Century and Its Social and Psychological Consequences in Poland', *Journal of European Economic History*, vol. 4, no. 1, Rome (1975), 137-152; G.D. HUNDERT, 'Jews, Money and Society in the Seventeenth-Century Polish Commonwealth: The Case of Kraków', *Jewish Social Studies*, vol. 43, New York (1981), 269.

⁵⁰ F.W. CARTER, *Trade and Urban Development in Poland, 1480-1580*, Cambridge U.P. (1994), 202.

Graph 6. Relative movements of spice prices, 1450-1800. The French case.

Source: MAURUSCHAT, Gewuerze, Zucker und Salz.; 'Preise in Frankreich', Tabelle 2





decline. And in any case, long before then market indications had heralded the coming of a new trading age where other eastern products such as the silks and cottons of Bengal and the tea of China started to constitute Europe's commercial priorities. Relative profit margins - as suggested in section 10.6. - can illustrate this trend far better than price information.

10.3. Price and product differentiation.

The spices themselves were sold in many different degrees of quality and in accordance with the choiceness of the pieces themselves. Powdered spice, which conserved its aroma more weakly, sold for considerably less than dried, or preserved spice. We find in the Affaitati's *Grands Livres*, under special rubrics accorded each product, that besides the *poivre du contrat*, of a standard that was ironically and evidently little met, there was a *poivre mariné*, before descending further the scale of value to the tips (*garbello*) and the left-overs (denoted as *peverelle, roagi et altre bruture di pepi detto bastone*). The trading correspondance at the end of the century suggests that a three-tiered pricing index was commonly used by the Fugger company. Their agent, De Hertoghe, for example would have liked to have sold pepper *commun* at 36, *moyen* at 38 and *gros* at 40 groeten to the pound in 1593.⁵¹ The Crown trading administration, as one might expect, was not so selective as the private market and actively sought, as we have seen, to uphold the idea of long-term, monolithic values in a bid to stabilise trading relationships and ward off speculation; its lots were principally divided according to the most rudimentary notion of provenance, hence *pimenta (da India)* and *pimenta de Guiné*. A distinction was made between *pimenta redonda* and *pimenta longa*, and an exception made for *pimenta molhada*.⁵²

Other spices were sold off at different prices on the basis of similar classifications; the heads of cloves (*cravo de cabeça*, or simply *garofali*) were universally preferred to the stalks (*cravo de bastão*, or *fusti*) and consequently enjoyed a higher market price, though the reasons for this were not purely qualitative but because the *bastão* took up to fifty percent more space on board for the same weight of *cabeça*.⁵³ A mixed consignment of stalks, heads and buds

⁵¹ letter to De Hertoghe, December 22, 1593. From the Fugger Archives 2, 1, 35 and cited by H. KELLENBENZ, *Autour de 1600: le commerce du poivre des Fugger et le marché internationale du poivre*, (1956), 21.

⁵² 'Lista das mercadorias permutadas com os estados de Flandres e Brabante no reinado de D. Manuel', A. BRAAMCAMP FREIRE, *Notícias da Feitoria de Flandres*, 119 ff.

⁵³ *Documentação. . India*, vol. IV, 373; *As Gavetas da Torre do Tombo*, ed. A. da Silva Rego, Lisboa: Centro de Estudos Históricos Ultramarinos, (1960-77), vol. VIII, 183; S. BOTELHO, 'Tombo do Estado da Índia', in *Subsídios para a História da Índia Portuguesa*, ed. Feiner, Lisbon (1868), 113; *Insulíndia*, I, 575 and

sold for 34 shillings as oppose to 131 shillings a pound in 1592. Cinnamon was sold mixed (*in Sorte*), then in various different sizes as short (*cort*) and extra-short (*spoletti*), and in large bundles (*matta*).⁵⁴ Ginger was sold according to variety, but also form, be it fresh (*zenzeri verdi*) or else as a conserve in sugar (*zinziberum conditum, giengiovo confetto*) prepared in Bengal and transported to the West in small quantities.⁵⁵ Nutmeg, similarly, was sold confectioned as candied nutmeg cakes (*nose condite pate*).⁵⁶

10.4. The market for substitutive goods; competing or supplementary trade?

Whilst at one level the Portuguese went about exploiting the European trade in traditional spices, first hand contact and exposure to their natural habitats multiplied awareness of the extent of cultivation or natural occurrence, the varieties and sub-species of particular plants. Pepper was found to grow in coastal areas across the Indian Ocean, with large regional markets from Pegu to Achen and Priaman. Further, many oriental spices found their equivalent in similar products arriving from Portuguese Africa, and this was only exacerbated with the gradual colonisation and integration of Portuguese Brasil, hugely rich in vegetal life. These spices tended to be cheaper and, if often not considered of the refinement of their oriental equivalents, would appear to undercut those competing from India in the market-place.

Now, might it be the case that Portuguese trade was competing against itself or, should we merely see this as supplementary trade, associated extras voraciously consumed by a European market that could not get enough of these same products? The latter - market widening - is clearly Pierre Chaunu's preference, though he fails to provide supporting arguments as to why that should be the case.⁵⁷ Unfortunately, such a phenomenon would be difficult to measure; what would need to be known is how many new customers who would not have bought oriental spices with their established household income were created, as

III, 494.

⁵⁴ A.H. de OLIVEIRA MARQUES, 'Um Preçário de Mercadorias e de Câmbios de Hamburgo, do Século XVI', in *Portugal Quinhentista: Ensaios*, (1987), 216.

⁵⁵ BARBOSA, *Livro de Duarte Barbosa*, in *Collecção de Noticias...*, Lisbon (1812), 229 (323a, Heyd); GARCIA D'ORTA, *Coloquios dos simples, e drogas he cousas mediçinaes da India. .*, 212 (cit. Heyd, II, 622).

⁵⁶ from the list of products bought on Alessandro Magno's trading venture from Venice to Alexandria in 1561, LANE, 'The Mediterranean Spice Trade. Further evidence of its revival in the sixteenth century', *American Historical Review*, 45, (1939-40), 583.

Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580

European Expansion in the Later Middle Ages, Amsterdam and North-Holland (1979), 300.

oppose to the number of customers who were lured off their traditional purchases of oriental spices through the conviction that they were now getting the same products for half the price of what they had been accustomed to pay. To economists this classic problem is illustrated with the example of the opera house; by what system of variable seat pricing can one maximise revenue at an opera house?

There were no tools from which such market analysis might have been conducted available to the Portuguese, but the possibility that substitutive goods were threatening the market for oriental spices was perceived at an intuitive level. This was particularly vocal as far as private contractors, who had rented out specific lines of trade or routes, were concerned. We hear in 1579 from the private contractors of the Indies trade in ginger and nutmeg, Fernão Lopez and Diogo de Barreira, who argued that they were forced to sell for less than they had paid the Crown for the exclusive contract due to competition from substitutes arriving from Brasil and other regions of India beyond their control.⁵⁸ This might have included São Tomé ginger which in 1575 had just appeared on the European market, and of which as much as 2000 quintals had been bought up by one Gaspar Carnero in Lisbon at 7000 reis a quintal. We must pass over the fact that it appeared to be selling poorly in Flanders, at the mean price of 12 grossos (*gruesos*), little more than those initial market blues that we have observed with respect to Portuguese pepper and malagueta.⁵⁹ The proof resides in subsequent official legislation. For at some time before 1593, the Crown found itself constrained to prohibit planting in São Tomé 'for the damage it did to that of India' (*pelo prejuízo que fazia ao da Índia*).⁶⁰ But by this time, the challenge to oriental ginger had passed outside Portuguese political control. Of the two varieties of ginger cited in a Hamburg commercial price list of 1592, and if we are to believe the currency conversions made by Oliveira Marques, that of Calicut was selling for 6 marks, 6 shillings (amounting to 102 shillings), while ginger from the Spanish colony of Santo Domingo was selling at 18½ shillings, that is, more than five times less!⁶¹

There are a number of other instances of direct government intervention. Brazilian

⁵⁸ see J. GENTIL DA SILVA, *Contratos da trazida de drogas no seculo XVI. Subsídios e documentos*, (sep.) in *Revista da Faculdade de Letras de Lisboa*, tom XV, 2a serie (1949), 25 et al. From the Arquivo Histórico Ultramarino, Índia, papéis avulsos, caixa 1, doc. 61.

⁵⁹ Letter from Fernando de Morales to Simon Ruiz at Medina del Campo, dated 14 January, 1575 and in which São Tomé ginger is described as a new drug (*una droga nueva*). Published in *Marchandises et Finances. Lettres de Lisbonne. 1563-1578*, ed. J. Gentil da Silva, vol. III, 4.

⁶⁰ *Rendas de Portugal* (1593), 64.

⁶¹ OLIVEIRA MARQUES, 'Um Precário de Mercadorias e de Câmbios de Hamburgo, do Século XVI', in *Portugal e o comércio de especiarias, 1480-1580*, ed. Halikowski Smith, Stefan (2001), 216.

indigo exports, for example, were circumscribed so as to leave the European market open for indigo cultivated in Gujarat and woad from the Azores. But while, in this instance, political intervention seems to have succeeded in protecting the trade of the eastern product - Balbi watched 1500 bales, probably 3000 quintals of eastern indigo being unloaded from the São Salvador in 1587, while Thomas Mun noted in 1621 that one third of East India Company imports consisted of indigo and other dyestuffs - it couldn't, or didn't seek to win, each such contest. The indigo arriving in Frankfurt am Main between 1624-27 was ultimately from Santo Domingo, while that in the Hamburg price list of 1592 from Caracas; in both cases, the New World.⁶² And Imperial statutes of 1577, 1594, 1603, 1638 and 1654 and countless German city council ordinances forbidding the use of indigo for the protection of the native woad failed to halt woad's rapid demise.⁶³

In the case of the red dye producing brazil wood (*Cesalpinia sappan & brasiliensis*), seized in such quantities at the time of Vasco da Gama's second voyage in 1502-3, both its bulk - for the dye itself did not enjoy great longevity and manufacturing had to be undertaken *in situ* - combined with the superior dye yield from the South American species clearly reasoned in the long term for the exploitation of abundant and more accessible forests in South America.⁶⁴ The Crown leased the trade consequently for the trifling obligation of 18 quintals a year to Cristovão Jacques, who justified his worth as a pawn in the political stand against French encroachments on the Brazilian coast.⁶⁵ But the leasee Fernando della Rogna was more demanding, insisting that the Crown agree to cease all parallel imports from the Indies (*che questo Serenissimo Re deveda che non ne sia stratto da qui avanti della India*).⁶⁶

We might choose to address the complex dynamics of the pepper market as a case study of product substitutability, which was not at all the homogeneous good Douglas Irwin posits as a base assumption in his attempt to analyse the Anglo-Dutch rivalry for the East

⁶² Stadtarchiv Frankfurt am Main, Jud. M 179, cited in Wolf-Rüdiger BAUMANN, 'Dyestuffs and Mordants and their use in the Dyehouse', in *The Merchants Adventurers and the Continental Cloth-trade (1560s-1620s)*, (1990), Table 2.

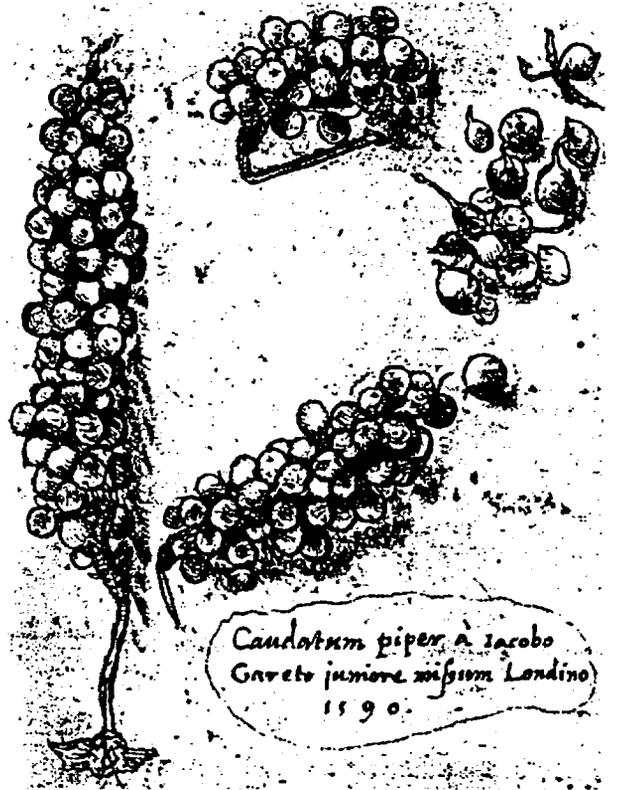
⁶³ BAUMANN, Wolf-Rüdiger. *The Merchants Adventurers and the Continental Cloth-trade (1560s-1620s)*, 29-31.

⁶⁴ see *Viaggi di C. Federici e G. Balbi alle Indie Orientale*, Il Nuovo Ramusio IV, Roma (1962), 220.

⁶⁵ F.M. Esteves PEREIRA. 'O descobrimento do Rio da Prata', in *História da Colonização Portuguesa do Brasil*, II, 363.



Betel, or Bastard pepper. GERARD, *Herball or General Historie of Plants*, London (1597), 1357.



Caudatum piper, *pimenta de rabo*, or tailed pepper, from a drawing of Jacob Garet, apothecary in London (1590).



'Calecutischer Pfeffer', a strain of capsicum pepper, from L. FUCHS, *New Kreüterbuch.*, Basel (1543), CCCCXVIII.

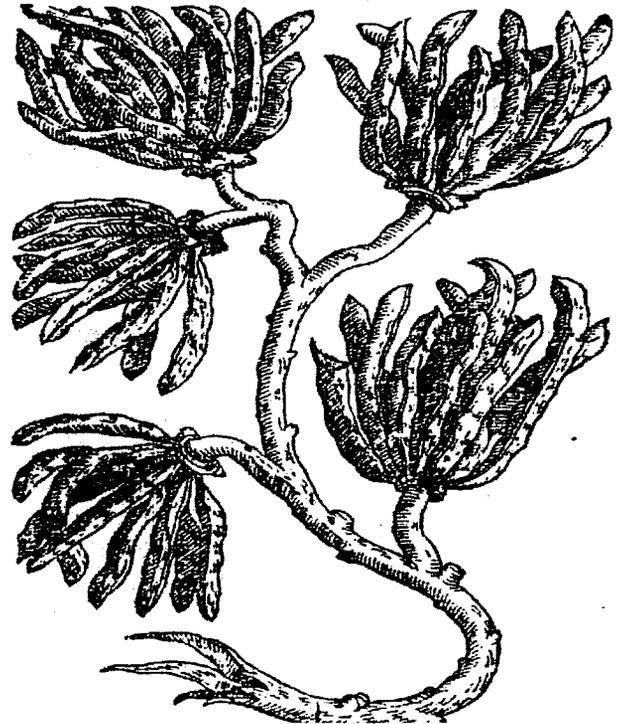


Cubeb pepper. Figures 1 & 2 depict the inflorescences, from *Il Mondo della Natura. Enciclopedia motta di scienze naturali*, Milan: Federico Motta, (1962), vol. III, 347.

Figure 13. Pepper substitutes.



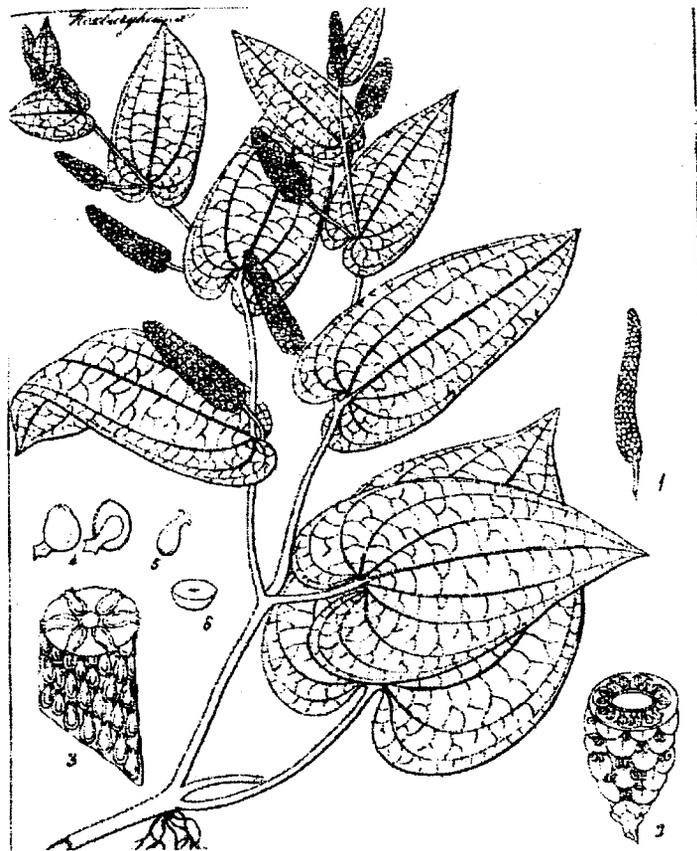
Allspice (*Pimenta officinalis*).



'Piper Aethiopicum siue Vita longa', Ethiopian pepper, from GERARD, *Herball, or General Historie of Plants*, 1355.



Malagueta 'pepper', or *Aframomum meleguetta* (Roscoe), K. Schumann, in ENGLER & DRUDE, *Die Pflanzenwelt Afrikas insbesondere seiner tropischen Gebiete*, Halle, 1908.



Long pepper, or *Chavica Roxburghii* (Mig.), from R. WIGHT, *Icones Plantarum Indiae Orientalis, Madras* (1853), t. VI, 1928.

India trade with the Brander-Spencer analysis of duopolistic export competition.⁶⁷ The differentiation here was not one, as with indigo, of variance related to geographical provenance. I know of no distinction drawn between Sumatran and Keralan pepper on the European market. Rather, as Pliny remarked, there existed a wide range of products one could consider *piperitis*, or of peppery taste (see accompanying Figure 13.1/2).

a) *Betel*, or 'bastard pepper', (*Piper betle* L., or *Chavica betel*).

Some, such as betel or 'bastard pepper', if producing a fruit 'of the taste of Pepper, yet very pleasant to the palate', and despite widespread adoption by the Portuguese from host societies across the Indies, were never exported beyond the Levant.⁶⁸

b) *African cubebs*, *West African pepper*, *Ashantee pepper*, *pimenta de rabo*, *Piper caudatum*, *piper salvatico* (*Piper guineense* or *Piper clusii* Cas. DC.).

Others, such as African cubebs, which must have been what Depping was referring to when he writes of the trade of São Tomé pimento, were explicitly prohibited in the face of the danger of product substitution.⁶⁹ African cubebs went under many names, as West African black pepper, or else Ashantee pepper, to the Portuguese as *pimenta de rabo* (literally, tailed pepper) and Latinized accordingly as *Piper Caudatum*, and classified as *Piper guineense* or *Piper clusii* Cas. DC. In appearance, *pimenta de rabo* most closely resembles the cubeb pepper - and indeed the plant was often confused as such, as we find in Plate XV of Theodor de Bry's *Indiae Orientalis* (Frankfurt, 1601) and, equally, its traditional classification by Miquel as *Cubeba clusii* - though the ash grey round berries might appear a little smaller. Its taste and particularly its odour, however, is akin to common black pepper, though less bitter and of 'a sharpe, quicke taste', decidedly hotter and more pungent ('of a good smell').⁷⁰ Chemical research similarly suggests the principal constituent is piperin rather than

⁶⁷ Douglas A. IRWIN, 'Mercantilism as Strategic Trade Policy: The Anglo-Dutch Rivalry for the East India Trade', *Journal of Political Economy*, vol. 99, no. 6, (1991), 1301.

⁶⁸ GERARD, *Historie of Plants* ., ch. 147. 1357.

⁶⁹ DEPPING, *Histoire du commerce entre le Levant et l'Europe depuis les croisades jusqu'à la fondation des colonies d'Amérique*, Paris (1830), II, 273-4

⁷⁰ 'This tailed or long pepper so far excelleth the pepper of the east Indies. that an ounce thereof is of more force than halfe a pound of that other'. LEO AFRICANUS, trans. by J. Pory as *Leo's Geographical historie of Africa* (1600). Introduction, 42. GERARD, 1356. J.E. MENDES FERRÃO, *Especiarias: cultura, tecnologia, comércio* (1993), considers *pimenta de rabo* 'duas vezes mais forte que a pimenta de Calecure'. 25.
Halkowski Smith, Stefan (2001), Portugal, and the European spice trade, 1480-1580
European University Institute DOI: 10.2870/92585

cubeb.⁷¹ Its seed is buried inside a smooth, hard shell that does not usually wrinkle, a fact that struck the Portuguese when they compared it to ordinary Asian pepper.⁷² It was known as tailed pepper for the stalk, which remained firmly attached to the fruit even when ripe, but was also known as coarse pepper, for the shell that contained it. It was not a cultivated plant and was almost certainly what Ca' Masser meant and described as *piper salvatico*.

Now, if we were to sanction the historical work of Margry, who has speculated on the Admiralty Registers at Dieppe, otherwise destroyed by a fire in 1694, *pimenta de rabo* had been shipped to northern European markets by merchants from Rouen and Dieppe for almost a century before João Afonso de Aveiro brought a sample to Dom João II from the Ivory Coast in 1486.⁷³ On the Portuguese arrival in the region, the São Thomé settlers were encouraged to buy in the Niger delta to resell to the Crown for a fixed price.⁷⁴ Given the immediate similarities with oriental pepper, however, *pimenta de rabo* was censured by the Portuguese Crown for fear of depreciating Indian pepper; this is how it is reported by Ca' Masser and passed on, through Orta, to Clusius, whose research merited his name's attribution to the plant in question. In any case, after about 1507 no further imports of this product to Portugal are documented in official records, though a contraband trade arose with northern Europe.⁷⁵ An English visit to the Gold Coast in 1553, for example, picked up a cargo of grains of paradise and pepper, surely *pimenta de rabo*.⁷⁶

c) *Cubeb pepper (Piper Cubeba, Linn. f.)*

True cubeb pepper (*Piper Cubeba*, Linn. f.), a climbing, woody dioecious shrub indigenous to Java, southern Borneo and Sumatra, also had behind it a long tradition of sale

⁷¹ STENHOUSE, *The Pharmaceutical Journal and Transactions*, vol. xiv, first series, 1855, 363.

⁷² Duarte Pacheco PEREIRA, *Esmeraldo de situ orbis*, trans. and ed. G.H.T. Kimble, London (1937), 119.

⁷³ MARGRY, *Les navigations françaises et la révolution maritime*. Charles de la RONCIÈRE, who dedicated much of his *opus magnum* to investigating the claims to Norman involvement in the mid-Atlantic from the fourteenth century, has insisted that 'les voyages des Normands aux côtes de Guinée en 1364 sont du domaine de la légende', *La Découverte de l'Afrique au Moyen Age*, 3 vols., Cairo (1927); Garcia de RESENDE, *Chronica de D. João II*, ed. (1622), fol. 43.

⁷⁴ *Descobrimientos Portugueses*., vol. 3, 207, doc. 200 & 428-9, doc. 289.

⁷⁵ CA'MASSER, *Relazione alla Serenissima Repubblica de Venezia*. . (1497-1506), 86; CLUSIUS, *Exoticorum libri decem*., (1695), lib. 1., ch. 22; 'Navigazione da Lisbona all'Isola di San Tomé, scritta per un Piloto portoghese e mandata al Mag. Conte Raimondo della Torre di Verona' (1556), in Rinaldo CADDEO ed., *Le Navigazioni Atlantiche di Alvise Da Mosto, Antoniotto Usodimare e Niccoloso da Recco*, Milano: (1956), 306-07.

⁷⁶ HAKLUYT, 'First Voyage of the Primerose and Lion to Guinea and Benin, A.D. 1553', *The Principal Navigations, Voyages, Traffiques and Discoveries of the English Nation*, ed. Hakluyt, London (1926), ii, pt. 2 ff.

on the European market. It seems to be first mentioned in the writings of Constantinus Africanus of Salerno in the eleventh century, and is repeatedly commented on thereafter, both by travellers to the Far East such as Marco Polo and Odoric, but also in European pharmacopeia such as the *Confectbuch* of Hans Folcz of Nuremberg (d.1480) and Saladinus' *Compendium aromatoriorum* (Bologna, 1488).⁷⁷ Like pepper, it was prized for its aromatic smell and hot, somewhat bitter taste; later chemical tests have revealed, however, that its active chemical, cubebin, is considerably less prevalent (2%) than piperin in black pepper (7%). Nor was it universally considered a pepper: German records often refer to cubeb 'raisins' (*Rosinen*).

As was the fate of *pimenta de rabo*, the European market for cubebes seems to have dwindled over the course of the sixteenth century. Thus, if 191 quintals of cubebes were contained in the cargo of 1504 imported to Portugal, between 1508-1512 the factor at Cannanore purchased only 1.6 quintals.⁷⁸ Garcia d'Orta speaks of them as seldom used in Europe. Why was this the case? Traditional comment suggests that they were held in such high esteem by Indians that they were not released for export to Europe ('quas Indi in tanto habent pretio, vt non nisi coctas eas in terras alienas exportent').⁷⁹ High prices on the European market would seem to confirm this. An ordinance stipulating the sales price of drugs by apothecaries in the city of Ulm in 1596 suggests that *Fructus carpesiorum vel cubebarum* commanded eight kreuzers a half ounce, that is four times the price of black and white pepper and a value akin to that of the best manna, opium and amber, but the tininess of the measure suggests it was in very short supply.⁸⁰ It comes as a great surprise, consequently, to hear from Barbosa that in Asia, by contrast, the price of cubebes was so low that he did not consider worthwhile citing a figure; they were only sold for oil.⁸¹ What can this mean? Not that cubebes were chased out by the ease of access to and the proliferation of other substitutes, closer perhaps in taste to the *bona fide* pepper, but that it was such a marginal taste that the demand did not articulate itself clearly enough to suppliers, who would otherwise have imported in greater quantities.

⁷⁷ for the former, see Ludwig CHOULANT, *Macer Floridus etc.*, Lipsius (Leipzig), (1832), 188.

⁷⁸ CA'MASSER, *Relazione.* ., 19; A.N.T.T. Chancel. de D. Manuel, Liv. 38, fl. 125r-126r.

⁷⁹ Theodor de BRY, 'Indiae Orientalis' in the *Great Voyages* series, Frankfurt (1601), XV.

⁸⁰ cited by REICHARD. *Beiträge zur Geschichte der Apotheken* (1825), 124.

⁸¹ Halikowski Smith, Stefan (2001). Portugal and the European spice trade, 1480-1580. *List of drug prices at Calicut around 1516, Duarte BARBOSA, The Book of Duarte Barbosa*, 384-5. DOI: 10.2870/92585

d) *West African malagueta, 'grains of paradise' (Aframoma genus).*

It is unclear what was the Portuguese position adopted as far as the trade in West African malagueta and colloquially known as grains of paradise is concerned. The German historian Hümmerich insists that the Crown prohibited its export to Europe in 1506, citing the dangers of its prejudicing the oriental trade.⁸² But there is no reason to believe him. He may simply have misinterpreted the brief of April 2, 1506 *Desideras ut nobis*, which reaffirmed the exclusive monopoly of the Crown over such products.⁸³ In any case, repeated crown contracts for the management of the malagueta trade, first with Bartolomeu Marchione in 1507, 1509 and 1510, and then the Italian Calliro Redolho in 1512, followed by the Genoese Caticho in 1514, only make nonsense of Hümmerich's proposition. Indeed, by contracting out the rights to the malagueta trade over the following decade, the Portuguese Crown was only relinquishing what control it was left over the quantities of malagueta exported to the European market.⁸⁴

What needs to be established, as elsewhere, is whether malagueta 'pepper' was genuinely considered a substitute, and hence a competitive threat to oriental pepper. They do not, after all, share a common botanical origin. Malagueta, or grains of paradise as they were also known, are seeds of several closely related plants of the genus *Aframoma*, of the family *Zinziberaceae*, and of the order *Zingiberales*. In appearance, the seeds are reddish, round and somewhat warty, with white insides; more akin to cardamomum than pepper. Their taste has been described as highly aromatic, pungent, fruity but not acrid. Other commentators have singled out their most pungent and burning taste - 'an exceeding hot taste', or 'scharf ist wie pfeffer'.⁸⁵ Tests have revealed that malagueta yields considerably less essential oil (0.3% of overall weight) than black pepper (1.6-2.2%).⁸⁶

Now, Ivana Elbl asserts that 'the Portuguese.. never spoke of malagueta in connection

⁸² F. HÜMMERICH, *Die erste deutsche Handelsfahrt nach Indien*, 33; also, Lúcio de AZEVEDO, *Epocas...*, 78.

⁸³ published in *Corpo diplomatico portugues*, ed. L. Augusto Rebello da Silva, Lisbon, Academia Real das Sciencias. t. I (1862), 97.

⁸⁴ The Calliro Redolho contract of 1512 is reproduced in *Arquivo Histórico Portuguez*, ed. Freire, vol. 2, p. 441, doc. 297.

⁸⁵ GERARD, *Historie of Plants*, Bk. 3, 1358; Josua MAALER, '*Die teütsch spraach. alle wärter, namen vnd arten zu reden in hochteütscher spraach..*', Zürich (1561), 315c, as cited in GRIMM, *Deutsches Wörterbuch*, Leipzig (1889). Malagueta was described by BAUHINUS as of 'eines scharfen Geschmacks/aber lieblicher Geruchs', *Neu vollkommnen Krauterbuch. Mit schoenen und kuenstlicher Figuren. . .*, (Basil, 1672), 3 Buch, 1319.

⁸⁶ for a description, see VAN HARTEN 'Malagueta pepper' in *Economic Botany* and TACKHOLM & DRAR, *Flora of Egypt*, vol. 4, Cairo (1969), 140; also FLÜCKIGER & HANBURY, *Pharmacographia. . .* (1874), 59; Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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with pepper of any kind'. Godinho would agree: 'There was no equivalent of the malagueta among the Asian spices; for this reason its trade continued as normal'.⁸⁷ Indeed, botanically they were immediately allied to the cardamom out of deference to the Ancients and their seeds, collected in husky pods, recorded as *Cardamom major (maius), medium and minus*.⁸⁸ But although he supplied no image of the plant, Clusius in his *Exoticorum libri decem* of 1605 was already insisting that 'malagueta cardamomū non est'. In England, malagueta gradually became known as malagueta pepper, although only from the eighteenth century when it was no longer widely consumed.⁸⁹ Its culinary application, however, had always widely mirrored that of pepper, that is, they were frequently used in conjunction or in substitute, as was instructed for the preparation of spiced wine, hippocras.⁹⁰ Perhaps sixteenth century man genuinely little distinguished between the taste of cardamom and pepper. Gerard, for example (see citation below) linked the taste of *Xylopiā aromatica* with that of common pepper and cardamom. But the best testimony must be that of the Nuremberg chronicle, in which malagueta is described in the following way: 'although not as wrinkled as that of the Orient, it however reminds one of real pepper from its sharpness and form, in fact, in everything' (*não sendo embora tão rugosa como a da Oriente, no entanto faz lembrar no picante, na forma, enfim, em tudo a verdadeira pimenta*).⁹¹

e) *Ethiopian or African pepper, Vita longa, Amomum, (Xylopiā aromatica of the Anonaceae family, and Habzelia aethiopica).*

There are two further species of pepper known to Europeans that are worth shadowing. One of these was the Ethiopian or African pepper, colloquially known as Vita longa and in shops, according to Gerard, Amomum, of which there were understood to be two variants or species, but which botany has proved in the final event to be two quite independent plants:

⁸⁷ 'Não havia equivalente da malagueta entre as especiarias asiáticas, por isso o seu comércio continuou normalmente', GODINHO, *Os Descobrimentos e a economia mundial*, II. 154; ELBL, *The Portuguese Trade with West Africa, 1440-1521*, (507).

⁸⁸ see, for example, BAUHINUS, *Neu vollkommen Krauterbuch. . .*, (Basileus, 1687), 3 Buch, 1319.

⁸⁹ first reference to malagueta as pepper is recorded by the Oxford English Dictionary, 2 ed., as 1705, in BOSMAN's *Description of the Coast of Guinea* (trans.), xvi, 285.

⁹⁰ cited by FLÜCKIGER & HANBURY, *Pharmacographia. . .*, (1874), 591.

⁹¹ SCHEDEL, Hartmann, *Portugal nās Cronicas de Nuremberg de Hartmann Schedel*, ed. J. Mendes de Almeida, (1959), 114.
Halikowski-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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Xylopiya aromatica of the Anonaceae family, and *Habzelia aethiopica*.⁹² Sixteenth century botanical texts described Ethiopian pepper as a tall shrub - ‘a smal tree, in manner of an hedge bush’, and Durante reminds us not to confuse it with the cubeb pepper - producing clusters of pod-like fruits, about two inches long,

‘of a browne colour, vneuen, and bunched or puft vp in diuers places, diuided into fiue or sixe lockers or cels, each whereof containeth a round seeds somewhat long, lesser than the seedes of Paeonie, in taste like common Pepper or Cardamomum, whose facultie and temperature it is thought to haue, wherof we hold it a kinde’.⁹³

I have not found records indicating that this pepper was extensively traded, though Gerard suggests it was ‘brought vnto vs from Aethiopia’ and Durante that it arrived in Europe via Alexandria. This was the *Habzelia* (formerly *Xylopiya aethiopica*), nowadays colloquially known as Negro pepper or Guinea pepper, a native of Western Africa.⁹⁴ But why was it then primarily associated with Ethiopia? Was it simply the imprecision of sixteenth century cosmographical discourse? This can be the only possible explanation, for the other variant, *Xylopiya aromatica*, was a native of South America. The fruits of this plant were made known to the West through Monardes, and echoed through a spate of succeeding botanists such as Gerard and Durante. Reported to grow ‘in America, in all the tract of the countrie where Nata and Carthago are situated’, the fruits were used by the natives instead of pepper: I have not found one indication, however, that it was ever commercialised.⁹⁵

f) *Long pepper (Piper longum, L.)*

The other species was long pepper (*Piper longum, L.*), appreciated since classical times, if confused for the buds of the generic pepper plant. If chemistry today has revealed that in terms of chemical composition and qualities, long pepper resembles ordinary black pepper and that both contain piperin, European scientific opinion commonly attributed long pepper the quality of heat in the third degree, but advised that it not be substituted for black

⁹² J. LINDLEY & T. MOORE, *The Treasure of Botany* (1866), 1243. The entry acknowledges that some of the *Xylopiya* species are often referred to *Habzelia*.

⁹³ GERARD, *Historie of Plants*, vol. 2, 1355.

⁹⁴ J. LINDLEY & T. MOORE, *ibid.*, 564; J.E. MENDES FERRÃO, *Especiarias: cultura, tecnologia, comércio*, still designates Guinea pepper by its former *Xylopiya* classification, 25.

⁹⁵ GERARD, *The Historie of Plants*, 1356. European spice trade, 1480-1580
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pepper.⁹⁶ Gerard, citing Monardes, suggests that long pepper is, 'in taste, sharper and hotter than common blacke Pepper, yet sweeter, and of better taste'; Orta suggests its taste was 'biting and rather bitter'.⁹⁷

But if this was once considered an item of luxury, and Pliny could report that long pepper cost as much as 15 deniers a pound as oppose to black pepper's 4, the situation had somewhat reversed by the sixteenth century.⁹⁸ On the Antwerp market in 1517, long pepper, at 8 dinheiros, was worth less than half that of black pepper (19 d 3/4).⁹⁹ Garcia de Orta commented how, within his recent memory, the price of long pepper at Cochin had plummeted from 15-20 cruzados/quintal to little more than five.¹⁰⁰ By the nineteenth century, long pepper had long been neglected outside traditional Indian medicine and only the Dutch were reputed to import it.¹⁰¹

g) *Paprika, pimento, tabasco pepper, chilli-pepper, Cayenne pepper (Capsicum annum, and its variants C. longum and C. grossum Willd., and Capsicum frutescens and its variants Capsicum minimum (Roxburgh) & fastigiatum).*

Meanwhile, a different challenge was launched on the European market for pepper and one that the Portuguese were particularly powerless to overcome. For the challenge was that of pepper substitutes from the Spanish Americas, a realm beyond Portuguese political interference. These were the many species of the *Capsicum* genus - an 'infinite number' according to Chanca - that are known to us today as paprika and Cayenne pepper (*Capsicum annum*, and its variants *C. longum* and *C. grossum* Willd.) and chilli-pepper (*Capsicum frutescens*) and its variants *Capsicum minimum* (Roxburgh) & *fastigiatum*.¹⁰² The first reference to this fruit is made in a letter of 1494 to the Chapter of Seville by Chanca, physician to Columbus' second voyage to the West Indies, and was subsequently described

⁹⁶ see, for example, Castore DURANTE, 'Non si hà da metter questo in luogo di quello', *Herbario Nuovo*, (1585).

⁹⁷ GERARD, *The Historie of Plants*, 1355-56; ORTA, *Colloquies on the Simples and Drugs of India*, 42/370.

⁹⁸ K.S. MATHEW, *Portuguese Trade with India in the Sixteenth Century*, 124; PLINY, *Historia Naturalis*, bk. XII, 7.

⁹⁹ Carta de Francisco Pessoa e Ruy Fernandes a D. Manuel, Antwerp, 24 March, 1517. A.N.T.T., C.C. pte. I, m. ?, doc. 21. *Apud* A.B.F. (A.H.P.?), doc. LXXXVI, pp. 244/5.

¹⁰⁰ ORTA, *Colloquies on the Simples and Drugs of India*, 44.

¹⁰¹ LINDLEY & MOORE, *The Treasury of Botany*, (1866), 'Chavica'.

¹⁰² see Halikowski-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580. *European University Institute*. DOI: 10.2870/92585

in the writings of Peter Martyr.¹⁰³ A lot of semantic and classificatory confusion was caused by the colloquial denomination of this plant in the Hispanophone world as *pepe d'India*, suggesting the western Indies, and subsequently taken up by a number of European botanists such as Castore Durante, who latinised it to *Piper indicum et siliquastrum*. This probably gave rise to the distinguished botanist Leonhard Fuchs's confusion in his misnaming *Capsicum longum* Calicut pepper in his *De historia stirpium*, published at Basel in 1542.¹⁰⁴

While the African peppers largely disappeared from the world market over the course of the sixteenth century, the American capsicum genus spread determinedly across the world. Today, the pimento is the world's third most produced spice, behind pepper and cloves.¹⁰⁵ Clusius, following Martyr, describes how American capsicum, or Spanish pimento, was rapidly brought into Castilian gardens and used all the year round. Castore Durante reports how easy it was to sow in vegetable gardens or terracotta pots, concluding that 'it has become absolutely common' (*è fatto per tutto volgare*). It also grew in the North. Clusius saw the pimienta cultivated in abundance at Brünn (Brno) in Moravia in 1585, and the plant was also grown in England by Gerarde before 1597, who speaks of its pods as well known and sold in the shops at Billingsgate by the name of Ginuie Pepper.¹⁰⁶ It is something of an anomaly that paprika, so emblematic of Hungarian cuisine, only seems to have been introduced into the country during the eighteenth century, and then started out at a popular level.¹⁰⁷

From the outset, as we have noticed from Fuchs and Gerarde, pimento was confused

¹⁰³ Diego Alvarez CHANCA, 'La Carta del Doctor Chanca, que escribió a la Ciudad de Sevilla', trans. by Cecil JANE in IBID., *The Four Voyages of Columbus*, New York: Dover Publications, (1988); Peter MARTYR, *The Decades of the Newe Worlde or West India*, trans. by Richard EDEN, London (1555) from *De Rebus Oceanis et Orbe Novo Decades Tres*, Basel (1533), repr. Ann Arbor, Michigan: University Microfilms, (1966).

¹⁰⁴ Leonhart FUCHS, *De historia stirpium commentarii insignes: maximis impensis et vigiliis elaborati, adjectis earundem vivis plusquam quingentis imaginibus, nunquam antea ad naturae imitationem artificiosus effectis & expressis*, Basileae: In Officina Insingriniana, (1542). This seems to be the simplest explanation. Even if a number of these species are to be found growing wild in India today, and indeed are considered the everyday basis of Indian cookery, they were almost certainly unknown there at the time Fuchs was writing. There does not appear to be any reference to them in ancient texts, indeed in India they are known as in Spain as 'chilies' (from where they came), and the nationalistic protests of the Indian Spice Board, which points to obscure Sanskrit references from the Vedas, is by all accounts dubious ('Hot chile', *The Economist*, December 19, 1998); they were most probably displaced at some later stage with all the Portuguese imperial traffic between Brazil and the East.

¹⁰⁵ Table I, 'World Production of Main Spices in Major Producing Countries', in F.A.O., *Spices. Trends in World Markets, Commodity Bulletin Series*, Rome (1962).

¹⁰⁶ Caroli CLUSII, *Curæ posteriores*, Antwerp (1611), 95.

¹⁰⁷ Sándor BÁLINT, *A szegedi paprika*, Budapest (1962) as cited by E. KISBÁN, 'Food and Foodways as the subject of historical analyses in Hungary', in Hans TEUTEBERG, *European Food History. A Research Review*, London, Smith 1997, (2001), Portugal and the European spice trade, 1480-1580
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with pepper. Columbus was not impressed by the similarity of taste ('pepper in shells like beans, very strong but not with the flavour of the Levant'), though the common pungency was remarked upon both by Peter Martyr and by Columbus's crew member Michele de Cuneo ('a fruit. . full of small grains as biting as pepper').¹⁰⁸ The former consequently suggested pimento was actively used to substitute pepper. Interference took place most pronouncedly within the Mediterranean, already less receptive to the harsher taste of black pepper, and into whose culinary repertoire Spanish pimento has more lastingly permeated. Castore, an Italian, reported already in 1585 how 'it is used in all condiments and foods as it is of better taste than standard pepper'; he personally recommends its use in *pan biscotto* and in broths.¹⁰⁹ Modern international trade flows demonstrate how dramatic are the imports of pimento into Spain, and to a lesser extent Portugal, when compared both with the quantities imported to other European countries and pepper imports into these countries. Almost four times as much pimento is imported into Spain per head of population than is the case for Germany, and almost eight times as much as pepper imported into Spain.¹¹⁰ The story of Hungarian paprika suggests that its success in the eighteenth century was primarily substitutive, and based on its cheapness of production.

h) Allspice, or pimienta Jamaica (Pimenta dioica, syn. P. officinalis, previously Eugenia pimenta, DC).

A closer relative to black pepper and discovered growing in Jamaica in similar fashion by Christopher Columbus in 1494 was allspice, or *pimienta Jamaica* as it was known throughout the Spanish speaking world. The large, black peppercorn-sized berries produced by the evergreen allspice tree, part of the myrtle family indigenous to the West Indies and South America (*Pimenta dioica, syn. P. officinalis*) and recognisable for its rattling seed when dried, is much used today for its pickling qualities and its aromatic versatility in both sweet and savoury dishes, though this was not greatly the case previously outside Levantine cuisine. Its taste is eclectic, hinting at a blend of cinnamon, nutmeg and cloves and only at a pinch

¹⁰⁸ in Samuel Eliot MORISON, *Admiral of the Ocean Sea: A Life of Christopher Columbus*, Boston: Little, Brown & Co., (1942), 435; Michele de CUNEO, 'Letters on the Second Voyage, October 28, 1496', in MORISON, *Journals and Other Documents on the Life and Voyages of Christopher Columbus*, New York: Heritage Press, (1963), 155.

¹⁰⁹ 'si vsa in tutti i condimenti de i cibi, perché è di miglior gusto, che il pepe commune', Castore DURANTE, *Herbario Nuovo*, Rome (1585), 344.

¹¹⁰ Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580. *E.A.O. Trade Commerce: A Statistical Synopsis*, (1994), Tables 79 & 80. pp. 179-182. DOI:10.2870/92585

(‘a pretty tight one’) the taste of pepper.¹¹¹ Its essential oil is eugenol. It would seem, on reflection, that it was the physical resemblance rather than the taste of the fruit that bracketed allspice with pepper.

The issue of product substitution is enhanced by the dynamics of the price differential between Asian and African spices. If, throughout the fifteenth century African spices commanded the highest prices on European markets, largely as a function of their scarcity, thereafter the situation reversed itself (see Graph 7). While pepper fetched 22 crusados at the Casa da India, malagueta was sold for precisely half, i.e. 11 cruzados.¹¹² *Pimenta de rabo* tended to sell for the same price as malagueta, while allspice from Jamaica was sold for as much as six times less than oriental pepper, commanding 47 maravedies/lb as oppose to Portuguese pepper from the Moluccas, which sold at 310.¹¹³

If we look at the quantities of malagueta placed on the European market, we discover a rapid development of African spice imports from the first cargoes of malagueta brought back by Diogo Gomes from the Rio Grande in 1465, and *pimenta de rabo* first brought to Dom João II from the Ivory Coast in 1486 by João Afonso de Aveiro. In 1503, sales of the former reached 68.000 kg. Ca’ Masser reports around 1506 that 2000 cantars of Guinea malagueta were sent to Flanders every year, in addition to 2000 cantars of *pimenta de rabo*.¹¹⁴ With this steady expansion of sales and in line with the great pepper slump, prices fell from twelve to six dinheiros a pound.¹¹⁵ Fortunes recovered under the contracting arrangements beginning with Marchione, with a peak import volume of 155.000 kg in 1509-10. The Redolho and Caticho contracts for malagueta were tendered out at 5¼ times the price of the Gomes contract forty years earlier. The price of malagueta rose from eight cruzados, in March 1508, to around eleven cruzados a quintal in 1514. Only thereafter did imports gradually fall off to around 40.000 kg. Was this, too, a reflection of the second pepper mini-slump around 1520, when imports climbed down from an annual average of 35.000 to hover

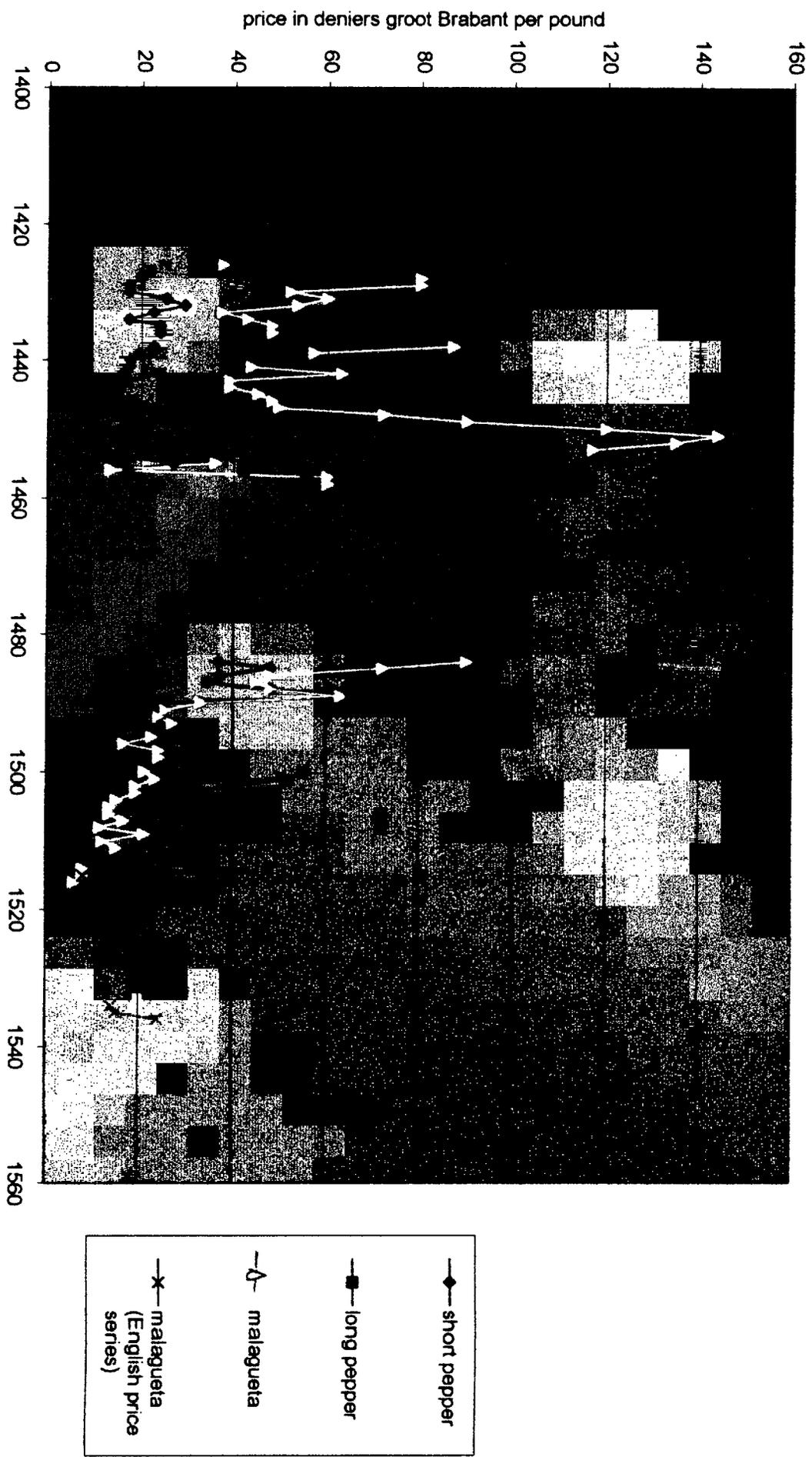
¹¹¹ *The Essential Guide to Spices*, BBC Magazines (1996), 8; Elizabeth DAVID, *Spices, Salt and Aromatics in the English Kitchen*, Penguin: (1970), 21-2.

¹¹² ‘Carta de Quitação del Rei D. Manuel de 28 Maio 1514’ (*Chancelaria de D. Manuel*, liv. XV, fl. 90, liv. V de *Místicos*, fl. 119). Apud A.B.F., no. 9, vol. I, carta 110, pp. 361/2. CA’ MASSER reports that malagueta sold for 10 ducats a cantar around 1506, *Relazione.*., 30.

¹¹³ Francisco GUERRA, ‘Drugs from the Indies and the Political Economy of the Sixteenth century’, in M. FLORKIN ed. *Materia medica in the Sixteenth Century.*., Oxford (1966), 38.

¹¹⁴ CA’ MASSER, *Relazione.*., 30.

Graph 7. Price substitutability on the Antwerp pepper market, 1409-1559



Sources: I. ELBL, *The Portuguese Trade with West Africa, 1440-1521*, Toronto (1986); J. THOROLD ROGERS, *A History of Agriculture and Prices in England* Oxford, repr. (1963)



about the 19.000 quintal mark, or was it a more definitive collapse? It is a little difficult to tell as we have so few indications of subsequent Portuguese imports - just the record of a royal sale of 400 quintals in 1537 - it is not even known under what arrangement.¹¹⁶ In any case, quantities marketed were never very large, never more than a tenth of Asiatic spice sales.

The concessions thereafter changed their form, and were no longer granted according to the product in question, malagueta, but the specific area. Thus after Caticho the trading opening fell to Cristobal de Haro, who rented the rights to trade along the stretch of Guinea coast opposite Sierra Leone (*S. Lioa*), though this contract apparently ended in fierce disputes with the Portuguese King over liability for lost ships.¹¹⁷ In any case, it would appear that the Portuguese Crown was left to exercise little control over flows of African products; besides sub-contracting the rights to trade, from around 1513-14 the Costa da Malagueta started to become the target of ever more animated private trading by French (particularly from the ports of Rouen and La Rochelle) and, if a little more intermittently, Castilian shipping, particularly from Seville, which had sailed to Guinea from the dynastic war between Afonso V and the Réis Católicos. After William Hawkin's pioneering voyage in 1530, they were joined by the English. All patently disregarded the nominal Portuguese monopoly.¹¹⁸ Despite many prospective expeditions, such as the 'armada que vá a lo de malagueta' reported by Sarmiento in 1540 waiting to sail from Lisbon with stone (*piedra*), presumably construction materials, the Portuguese never succeeded in constructing a fort on the Malagueta coast, which might have allowed a permanent force to limit the intrusions.¹¹⁹

In any case, malagueta did not offer a particularly propitious position on the European market (Graph 7). If it still commanded 12 dinheiros on term payments at the Easter fair at Ranna (Rouen?) in 1511, its price sunk steadily to 6 dinheiros in 1517, as far as we can gather from the correspondance from the King's factors in Flanders.¹²⁰ English records would suggest that there was a sharp price rise immediately thereafter, but we do not know

¹¹⁶ *Anais de D. João III*, t. II, 258-259.

¹¹⁷ see DENUCÉ, *L'Afrique*. ., 37; *Arquivo Histórico Portuguez*, (1903), vol. I, 358, 278.

¹¹⁸ The chronicle of Frei Luís de SOUSA makes an effort to keep a tally of ships lost to transgressors, *Anais de D. João III*, suplemento t. II, 233, 259, 262 ('Relatório do vèdor da Fazenda', 1542), 294, 297.

¹¹⁹ Archivo General de Simancas, Estado, Legajo 372, doc. 32.

¹²⁰ Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580. *BARATA, Rui Fernandes de Almada, diplomata português do século XVI*, (1971), 86. DOI: 10.2870/92585

if this provoked a corresponding commercial re-interest in the product.¹²¹ A sale at Lisbon was made at 12 cruzados/quintal in 1537, but this may have been distorted by the Crown. If there was a commercial re-awakening, the fruits were likely to have been harvested by the foreign fleets that were prepared to override the Portuguese embargo and trade piratically along that coast. But elsewhere in Europe we are instructed that prices did not rise from their basement level of 6 deniers throughout the 1520s and 1530s, even if pepper cost from four to six times that of malagueta.¹²² Further, from the second half of the sixteenth century we have little mention of this product. When Flemish merchants were accorded the right to trade in Portuguese Africa, malagueta doesn't seem to be one of the prospected products. The *St. Jan*, for example, which arrived in Antwerp in 1560 laden with 700 tonnes of West African cargo, chose to bear a heavy load of São Tomé sugar and various gums (*gommes*).¹²³ Other sources suggest that the grain of paradise, once so revered in French culinary texts of the thirteenth century such as the famous *Viandier*, was gradually replaced by standard pepper.¹²⁴

What might we conclude? Elbl's insistence that pepper and malagueta were two completely different spices provokes her to make the very bold statement that 'the actual cause of the decline of the malagueta prices had nothing to do with Asian pepper'. Instead, she blames 'the short-sighted policy of the Crown around the beginning of the sixteenth century', even if it is far from clear what it is that she considers short-sighted.¹²⁵ I, by contrast, have attempted to demonstrate the consumptive overlap between black and malagueta 'pepper' and, using available quantitative and price data, have tried to show how the interchange between the two products' market destinies is reducible to the inauguration of systematic Portuguese trade with the East. If malagueta never fully abandoned the European market subsequently, and was a readily accessible substitute for northern Europe before its own ships ventured to sail for India, pepper clearly established an absolute rule.

10.5. The problem of quality: Portuguese spices were inferior to their Venetian equivalents.

¹²¹ ROGERS, *A History of Agriculture and Prices in England*, Oxford, repr. Vaduz (1963), 663.

¹²² AZEVEDO, *Epocas de Portugal económico.*, 78; NUNES DIAS, *O Capitalismo Monárquico.*, vol. 2, 41-42.

¹²³ DENUCÉ, *L'Afrique au XVI^e siècle* (1937), 78-79.

¹²⁴ PLOUVIER, 'Et les épices pimentèrent la cuisine européenne', in *L'Historien*, no. 76, 84.

It is well known how fragile the essential oils responsible for the spices' individual flavours are to corruption from heat, humidity and quite simply the passage of time. Grinding or flaking before the invention of the vacuum sealed container only hastened the spoiling process. Even with today's technology of food conservation, spices are rarely accorded a shelf life of more than twelve months.

According to Paulus Centurio, a Genoese merchant and vehement detractor of the Portuguese monopoly in oriental spices, the Portuguese spices suffered from the:

incommodities of such long viages, whereby the spyces are so corrupted by the infection of the pompe and other filthnesse of the shippes, that theyr naturall sauour, taste, and qualitie, as well hereby as by theyr long reservyng in the shoppes, sellers and warehouses in Lusheburne [Lisbon], vanysheth and resolueth. ¹²⁶

Was Centurio merely articulating his 'great malice and hatred against the Portugales', or was it an universal grievance? Interestingly, in the letter of Guido Detti, a Florentine merchant who sailed with the fleet of Vasco da Gama, it is the other way around. The Portuguese spices, he writes, 'are nigh perfect, and in a much better state than those which come from Alexandria, because they are more fresh, like something that has been picked just a few days previously'. ¹²⁷

Just as we saw in §4.4. with the riddle as to whether it was Venetian or Portuguese who took the initiative in either tendering for or relinquishing the rights to the re-export trade, it is not immediately clear which account makes a more persuasive claim to our trust. However, if we turn to price arbitration, we can see that the Portuguese products were genuinely inferior to the Venetian as reflected in their market price. This price differential was particularly pronounced as far as the discrepancy between Venetian and Portuguese ginger was concerned; on the Antwerp market, Venetian ginger commonly fetched up to 40% more than the Portuguese. ¹²⁸ But the discrimination applied to all Portuguese spices, and was never made good. In the Hamburg price list of 1592, Venetian nutmeg (*Noten geclaut van*

¹²⁶ Richard EDEN, 'Of the northeast frosty sea and kingdomes lying that way' (1555), ed. R.H. Major, *Notes Upon Russia*, London (1851-52), 230.

¹²⁷ letter of 10 August 1499, transl. and rep. in *Voyages de Vasco da Gama*, ed. P. Teyssier & P. Valentin, Paris: Chandeigne (1998), pp. 183-188.

¹²⁸ in 1516, Venetian ginger sold for 18 dinheiros, whereas the Portuguese would not sell at more than 13. Letter of Ruy Fernandes dated 6 May, 1516 published in BRAAMCAMP FREIRE (1920), *Notícias da Feitoria de Flandres*, doc. LXXXVI, 250. In October 1505, ginger from Alexandria sold at 24 gros per pound, Portuguese at 17. Halkowski, Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
European University Institute degli ambasciatori veneti.

Venegien) was distinguished from its Portuguese equivalent, and the price asked 5 ss 6 as oppose to 4 ss 6 (a difference of 22%).¹²⁹

While picking pepper green so as to make the annual shipment from Malabar before the monsoons was usually attributed the principal cause of corruption, as reported in the letter from the Venetian orator, Cretico, of 19 September 1501, poor conservation was more seriously at fault.¹³⁰ The Portuguese did not appear to have the means of maintaining the moisture content of their spices between 10-15%. At times, the spice was brought in too dry and brittle, producing a lot of chaff (*casca*), which is recorded as the *quebra* or drop in weight on registration at the Casa da India.¹³¹ More often than not, however, the problem was the opposite. Portuguese spices, and particularly cinnamon, suffered contamination from protracted exposure to moist salt air on the long oceanic journey home.¹³² A large portion of spices was spoiled in this way on the returning fleet of 1509-10, and as much as 1011 quintals of spices were obliged to be marketed by the Crown Feitoria as *pimenta molhada* and sold at the discounted price of 15 dinheiros a quintal.¹³³ If left any longer, the damp might have provoked mould growth, which would have written off the entire cargo. Merchant handbooks always instructed buyers to test the dust that flaked off the pepper, which 'if moist, and sticking to your fingers, then hath it taken wet, and is not so good'; consequently they were to 'see that it be wel made up in good bagges, and giue charge it may be stowed in the driest part of the ship'.¹³⁴ Now, all the evidence would suggest that this advice was adhered to on the Antwerp run, where incoming cargoes were sometimes estimated not in quintals but in the number of canvas sacks aboard (*sacas de canavaço*).¹³⁵ The Antwerp magistrates' letters between 1490-1514, moreover, include a number of collection instructions issued by the Fugger factors, who apparently had the bales (*balles or balas*) of pepper that

¹²⁹ Richard EHRENBERG, in *Hansische Geschichtsblätter*, vol. IV, 165-170, (1883).

¹³⁰ 'the pepper is somewhat green and small', letter published in *(The) Voyage of Pedro Alvares Cabral to Brazil and India*, ed. Greenlee, 138.

¹³¹ see, for example, the regulations governing the Crown's compensation on pepper quotas brought back in the Carreira. Gaspar CORRÊA, *Lendas da Índia*, Lisboa (1859-66), 147; also letter of Gaspar Vaz to D. João III: 'a pimenta ha-de receber grande quebra', C.C., I, m. 47, doc. 75.

¹³² ORTA, 'e cõtado digno que hũ das drogas q̄ se corrompe nesta terra mais he acanela. e mais se for levada muyto tẽmpo por mar', *Coloquios dos simples, e drogas he cousas mediçinais da India..* ed. Lisbon (1895), 59.

¹³³ BRAAMCAMP FREIRE, *Notícias da Feitoria de Flandres*, doc. XXI.

¹³⁴ *The Merchants Avizo. Verie Necessarye for their Sons and Seruants. when they first send them beyond the Seas, as to Spaine and Portingale, or other countries*, (1607), 23, 51.

belonged to them marked with a number and an accompanying symbol such as 1†3 or Ψ0.¹³⁶ To be thus marked, they were presumably sealed in sacks. The Crown Feitoria similarly had their spices designated by the abbreviation N.P. (*Natie Portugal*).

The large cargoes brought back on the Carreira da India were not, however, afforded the same treatment, and were simply stored in the ships' open hold below decks on the mammoth journey back to Lisbon.¹³⁷ An anonymous Italian commentator in 1579, clearly surprised by such a means of conveyance, rushes to find an analogy with which to convince his reader(s) of such a possibility.¹³⁸ Others were more critical. Ca' Masser protested that the spice cargo, 'from the water which it encounters from below, stinks' (*per l'acqua che le tocca da basso, è puzolente*).¹³⁹ The truth would appear closer to outright fraud if we were to equate this established practice with a marketeer's trick that Luther relates; apparently, pepper, ginger and saffron were put in damp cellars or vaults so that the spices would take on extra weight.¹⁴⁰ But one might be more inclined to treat moist spices as a product of poor bureaucratic oversight. Sacks were perhaps in short supply in the East, for individual entitlements, the *liberdades*, were stored rather in wooden chests (*caixas*). In any case, piling up spices in damp cellars and vaults was more likely to have been a natural consequence of the policy of insisting on a minimum sales price at a time when the market was somewhat saturated, and all the indications are that the market price at Antwerp suffered accordingly.

That is not to suggest the Portuguese were strangers to cheating. Centurio accuses the Casa da Índia of exploiting the pre-established nature of the sales contracts 'so that reseruyng even the freshest and newest, they sell only the woorst and most corrupted'.¹⁴¹

¹³⁶ these examples have been taken from documents #3642 and #3813, published in R. DOEHAERD, *Etudes Anversoises. Documents sur le commerce international d'Anvers, 1488-1514*, Paris: S.E.V.P.E.N. (1963), vol. III.

¹³⁷ see Wolfgang REINHARDT, Abbildung 29, in 'Die alte Welt bis 1818', vol. I of *Geschichte der europäischer Expansion*, Stuttgart (1983), 94 for a schematisation of the layout of space on a returning East Indiaman.

¹³⁸ 'Ritratto et Riuerso del Regno di Portogallo', in the Niedersächsische Staatsarchiv St. A P 2399, Hannover, and reproduced by OLIVEIRA MARQUES, *Portugal Quinhentista*, Chap. 8. 'le nauí uengono carricate co i/pepi senza sacchi, a quella guisa, che si carica in Sicilia il formento', 180/1.

¹³⁹ CA' MASSER, *Relazione*. ., 28/29.

¹⁴⁰ *Luther's Works*, 'Trade and Usury', (1524), J.W. Lunden ed., vol. 45, 269; cf. a much more nefarious trick to add weight related by Isidore of Seville: 'For they take old pepper and steep it, and strew upon it spume of silver or of lead and dry it again, and so because of the weight it seems fresh and new', related in *The Travels of Marco Polo*, ed. R. Latham, (1972), 287-.

¹⁴¹ CENTURIO in EDEN, 'Of the northeast frosty sea and kingdomes lying that way' (1555), 230; Sebastian MÜNSTER also formulated this accusation in the Dedication to the Latin edition of his famous *Cosmographiae universalis*, Basel (1558), citing Paulo Jovius: 'com grande ganho seu [the Crown] e sensiveis perdas da parte

It went without saying that the Crown reserved 'the freshest and newest' for its own sales via the *feitoria* in Antwerp. In other words, if not the price then the quality of the goods the Portuguese passed on to the contracting re-export parties was entirely in their hands.

The quality of Portuguese spices suffered equally from the short-sightedness of an intimidatory policy of purchase in the coastal towns of Malabar. The essence of this policy was that spices should be sold exclusively to the Portuguese at a long-term established price. The prices the Portuguese paid were strictly minimal, and the whole convention was supported, if not encouraged by the threat of violence and mediated through local petty rulers, who undertook to promote the exchange in order to protect their subjects. It soon became evident, however, that the spices were getting adulterated from the Indian end, or simply that the poorest lot were offered, in order to balance out the injustices of an unfavourable transaction and the costs of a creeping inflation that rendered the Portuguese offering price more and more unreasonable.¹⁴² In some cases, the Portuguese had explicitly agreed to accept whatever quality of spices, in this case cinnamon, that was to come their way.¹⁴³ It is thus no surprise to learn that the *quebra*, or drop in weight registered on the Casa da India's scales once the spices had been properly cleaned ready for sale, rose steadily from 7% around 1518 to as much as 40% in 1557.¹⁴⁴ Moreover, it had always been the case that the better spices were to be had further up the coast at Calicut, whose market the Portuguese were never able to exploit as a result of unnecessary political antagonism from the time of da Gama's first voyage.

It tended to be at Antwerp, where the spices were passed on to private buyers, that the adulteration surfaced; complaints, it seems, were relatively common. In 1561, the consortium of New Christians composed of Luis Perez, Luis de Sevilla, Lope del Campo and Antonio Grimaldo del Rio made it known that they had received from Lisbon only 7 quintals, 38 pounds of pure pepper; the remaining 1315 quintals, 7 pounds were full of stones.¹⁴⁵ A

dos compradores, aos quais não forneciam, aliás, senão mercadoria de menos valor, ficando com os melhores', cited by A.E. BEAU, *As Relações Germanicas do Humanismo de D. de Gois*, (Coimbra, 1941), 165.

¹⁴² M.A.P. MEILINK-ROELOFSZ, *Asian Trade and European Influence in the Indonesian Archipelago between 1500 and about 1630*, The Hague (Martinus Nijhoff: 1962), 133. In a letter Piero Strozzi wrote to his father, Andrea, from Quiloa in December 1510, he noted that the locals 'non hanno con noi commertio alcuno salvo che per fortia', published in GUBERNATIS, *Storia dei viaggiatori italiani nelle Indie Orientali*, 382.

¹⁴³ A.N.T.T., *Corpo Chronologico*, pte. I. maço 51, doc. 96.

¹⁴⁴ GODINHO, *Os Descobrimentos e a Economia Mundial*, (1963-5), II, 46 ff.

¹⁴⁵ Stadsarchief Antwerp, Requestboeck, VI (1563), fo. 25 - the *maître des garbeleurs* was requested to produce an *amerciation* to support the consortium's complaint.
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complaint such as this had previously been brushed aside by the Crown in 1534, which had in any case made an incorrect diagnosis of the problem, thinking that it was the physical selection techniques in India that was under challenge. The Crown refused to consider changing 'any equipment, over the next year, for sifting and refining the pepper' and concluded, 'our cause will be served as previously and bearing this in mind I forbid that anything be changed'.¹⁴⁶ Failure to address the problem of adulteration and the resulting poor quality of Portuguese spices evidently cost the Portuguese dear in her European re-export markets. The Great Councils of Berne and Basil even published decrees banning the sale of pepper of Portuguese origin.¹⁴⁷

But - for the sake of sixteenth century consumers - at least the falsifications were not of the degree that Sébastien Mercier informs us were the case in late eighteenth century Paris, where 'some *fritons* mix in ground dog excrement which, because of its blackish colour, gets confused with the pepper. Instead of the Moluccan grains, the cheated Parisian eats dried dog crap'.¹⁴⁸

10.6. Long-term changing market demand in early modern Europe.

If spices were the primary commodity exported by Europeans from the Orient right up until the 1650s and, as we have seen, their prices remained buoyant until at least the 1620s, other sectors of international trade with the East were starting to show themselves off as more lucrative investments even by the second half of the sixteenth century. Tea and coffee only started to replace spices as consumer luxuries towards the end of the seventeenth century, while chocolate, sugar and tobacco started to compete a little earlier from the plantations of the West Indies. But if there was a close functional overlap between the traditional spices and these new 'colonial groceries' as we shall see, the challenge to the pre-eminence of the intercontinental spice trade was primarily a commercial one, that of textiles.

These were Indian light cottons made mostly in Bengal which, from around 1660,

¹⁴⁶ 'aucun attirail, pour l'année prochaine, pour tamiser et raffiner le poivre. . notre cause sera servie comme auparavant, et en en tenant compte j'interdis que rien ne soit changé', a letter sent from King to an unknown official in the East, dated Évora, February 17, 1524, translated and cited by WESEMBEEK, *La Casa de Portugal d'Anvers.* ., 13.

¹⁴⁷ FLÜCKIGER, *Beitrage zur alteren Geschichte der Pharmacie in Bern*, Schaffhausen (1862), 21; OCHST, *Geschichte von Basel*, III, 194. Both cited by Wilhelm HEYD, *Histoire du commerce du Levant au Moyen Age*, Leipzig (1885-6), trans. into French by F. Reynaud and repr. Amsterdam (1967), 534.

¹⁴⁸ 'quelques fritons y font entrer de la crotte de chien pulvérisée qui, par sa couleur noire, se confond avec le poivre. Au lieu de la graine des Moloques, le Parisien trompé mange de la merde de chien desséchée', Sébastien MERCIER, *Traité de Paris*, c. 1786, t. XII, 127.
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became the staple of the English East India Company in lieu of pepper, but had been brought on to the European market by the Portuguese during the sixteenth century, imported as unworked coloured cloth (registered in German trading manuals as *Tapeten*, and in Spanish as *alhonbras de la Yndia*), fine white cotton fabric known as *sinabaffs* or *sinawoffen* and *pombale*, which seems to have served amongst other things for bedspreads (*colchas*), later to become famous as 'calicowes', and other woven materials such as the *carmole*, *spica*, *nirbit* and *affron* mentioned in the *Driffas von Kauffmanschaft* of 1514-15 or the *ladrilho*, *topetins* and *enrolados* of all sizes mentioned by Pires and worked at Cambay and elsewhere in Gujarat.¹⁴⁹ The mid-century Spanish *Memoria de las mercaderías que entran en el Reyno* mentions a fair number of cotton fabrics 'de muchas suertes' imported into Spain from the Portuguese Indies; towards the end of the century, English merchants were encouraged to pick up 'yndewes [Indies] cobbard clothes called paintohos' at Lisbon.¹⁵⁰

Silks from China, too, were re-exported through Portuguese Malabar. Of a cargo exported in 1518, for example, 46 quintals of cloth and 45 quintals of Chinese silk were included; other sources specify this both as raw silk (*telillas*) or worked into a damask cloth (*damasquillos*).¹⁵¹ But silks remained something of a minority import: the Spanish *Memoria* was suspicious of 'Indian' silks, most probably for their quality, while more of the same flooded into the country from Germany and from Florence - so much so that the mercantilist-minded author recommends that the situation be closely monitored ('se debe bedar'), which we know to have resulted in a formal ban on Florentine *rajas* on 21 January 1565.¹⁵²

The relative rise in exported textiles was precocious. If, for the first half of the sixteenth century, pepper alone constituted 85% of the returning Portuguese cargoes (by weight), for the period 1580-1640 spices and drugs as a whole fell to 22% of returning

¹⁴⁹ 'Driffas von Kaufmannschaft (1514/5)', 165, 193 and 'Buch über Handelsbräuche - Der Quartband von 1506', 203, in K.O. MÜLLER, *Welthandelsgebräuche (1480-1540)*, Stuttgart (1934); Tomé PIRES, *The Suma Oriental*, ed. A. Cortesão (1941), 207.

¹⁵⁰ 'A speciall direction for divers trades of marchaundize to be used for soundrie placis upon adverticements, as well for the chusinge of the time & wares for every of those placis', ms. from *State Papers Domestic, Elizabeth*, vol. 255, #56, dated c. 1595.

¹⁵¹ A.N.T.T. *Núcleo Antigo*, no. 705; *Memoria de las Mercaderías que entran en el Reyno.*, 184.

¹⁵² the proclamation is covered in F. RUIZ MARTÍN, *Lettres marchandes échangées entre Florence et Medina del Campo*, Paris (1965), CIV ff. Notice of the shipwreck of the 'Santa Anna', laden on 15 January 1531 in Arnemuiden, was apparently transporting one item (*ein Posten*) of German silk destined for Spain, Staatsarchiv Nürnberg BB 103, fol. 5v-6v, and published by SCHAPER, 'Die Hirschvogel', in KELLENBENZ, *Fremde Kaufleute auf der Iberischen Halbinsel*, (1970), 182. Thus does the privilege of December 23, 1524 accorded the German trading community and offering a free import of silk stuffs encourage trade from the Indies to Europe or vice versa? From the Sonnemans collation, published by DENUCE in *Privilèges commerciaux accordés par les Rois de Portugal aux Flamans et aux Allemands*, 1480-1580

cargoes (by value) and cotton cloth assumed 62%.¹⁵³ Sugar, once decidedly left behind as a commodity in colonial trade as part of the leap from what we have categorised as the second to third *ciclo de negócio*, now rapidly closed the gap with spices, care of the newly established plantations in Brazil. We can follow this trend in the composition of the Portuguese colonial cargo shipped to Antwerp. If Guicciardini had estimated that the Portuguese spice trade was worth ten times that of the sugar trade shortly before 1540, the duty assessments of 1552-53 revealed that the gap was not quite four-fold. An unpublished English estimation of the scale of Portuguese trade at Antwerp undertaken in 1569 concluded that, if the value of precious stones, jewels, drugs and spices had remained at one million ducats, and that at least half a million ducats were brought 'in monie', then a third category, 'sugers of all sorts, cottons, oyles, soape and other merchandises' amounted to 1.500.000 ducats a year.¹⁵⁴

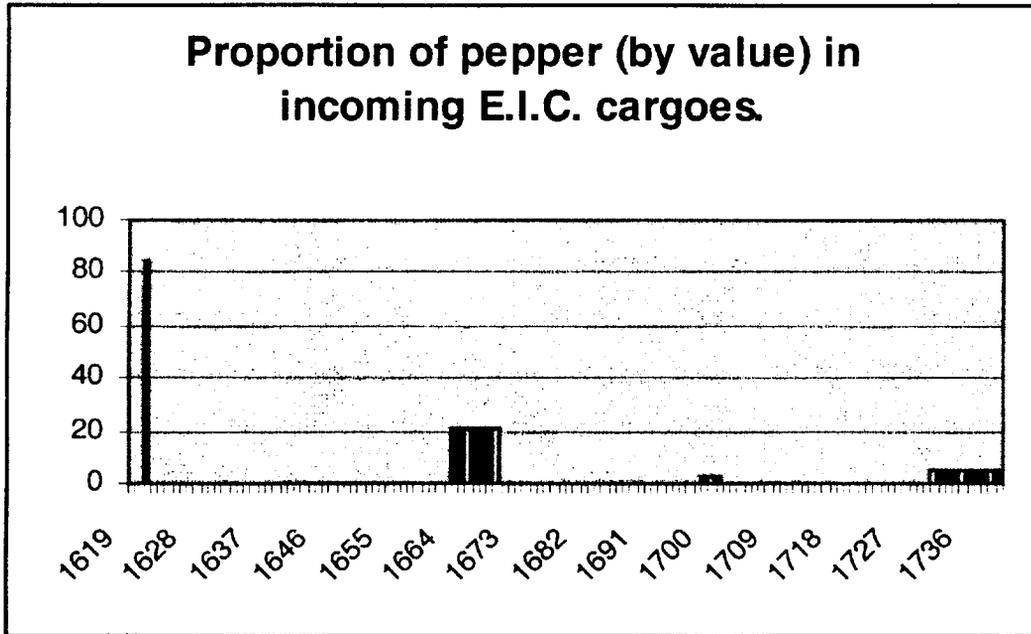
The process by which spices were steadily supplanted as primary colonial commodity of the East Indies was passed on to the Dutch and English East India companies during the seventeenth century. Graph 8 ('The relative decline of the spice trade) goes some way to demonstrating the process by which spices were substituted for Asian textile goods amongst incoming cargoes. It was on the back of such textile goods, and their principal dyeing agent indigo, furthermore, that Venice successfully re-oriented her trade with the East, picking out cottons which could be re-exported to the incipient fustian industry in Ulm, Augsburg and Nuremberg, combined with exploitation of the burgeoning market in Europe for far eastern silks, initially those of China but increasingly those of Persia, which could be skilfully manufactured by the city's artisans adding further value to the commodity than by commerce alone.

We can perhaps trace the decline in commercial interest for spices through the decreasing profit returns realised on them, particularly larger pepper, though with the quantitative expansion of the trade, profit margins per unit shrank by matter of course. If the initial voyages, such as that of Cabral in 1500, managed despite a loss of ships on the return leg to derive as much as a sixty-fold profit on capital invested, the institutionalisation of the spice trade in the wake of the 1505 decree still promised a secure return of 260% on purchase price

¹⁵³ James C. BOYAJIAN, *Portuguese Trade in Asia Under the Habsburgs, 1580-1640*, Baltimore (1993), 44.

¹⁵⁴ 'The commodities of the Portingalls tradeth', fol. 151 of larger report, 'Whether it be proffittable for the
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 Commonwealth of England, B. J. Cottoniana, codice Nero, B. 1.
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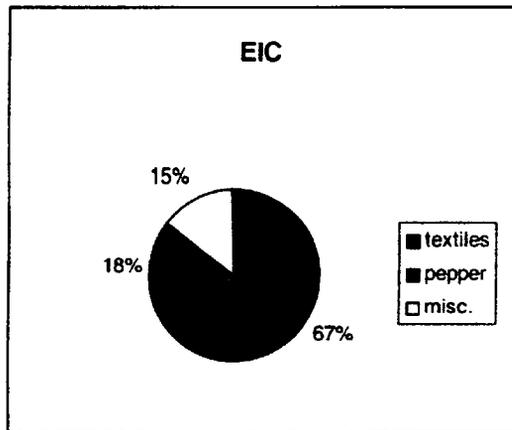
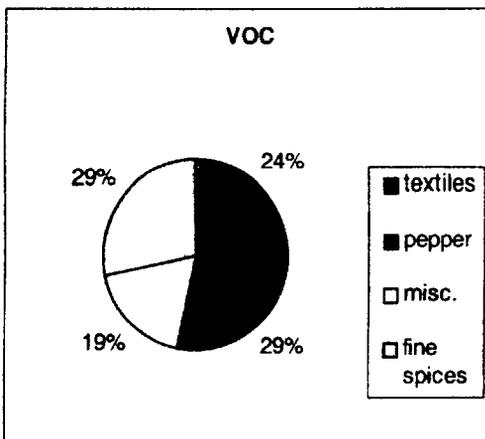




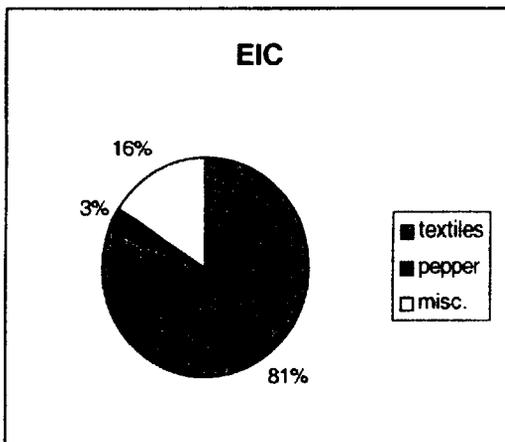
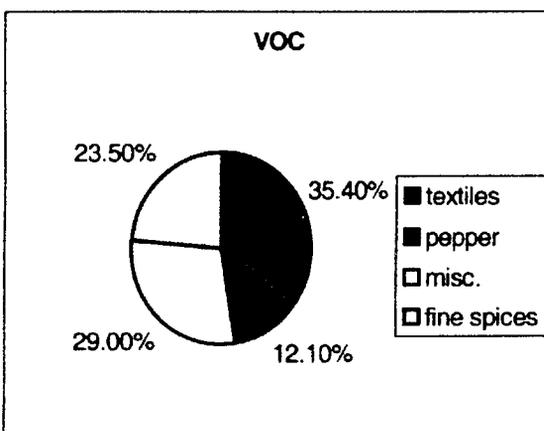
Source: R. DAVIS, *English Foreign Trade, 1650-1700, Economic History Review*, VII (1954), 163-66; N. STEENSGAARD, 'The Growth and Composition of the Long-Distance Trade of England and the Dutch Republic before 1750', in James D. TRACY, *The Rise of Merchant Empires*, C.U.P. (1990-1); D. ORMROD (see below).

nb. by value it is intended purchase price rather than sale price.

Composition of incoming cargoes from the East Indies, 1668-1670.



Composition of incoming cargo from the East Indies, 1738-1740.



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and freight costs.¹⁵⁵ Except that unforeseeables such as protection costs and the investments in the developing bureaucratic and political infrastructure quickly ate into profit margins. The net returns of private investors, meanwhile, were estimated at between 150-175%. Girolamo Sernigi sent four ships to Malacca; the returns from the first to arrive in Lisbon, in the spring of 1513, were enough to cover the costs of the whole expedition with a supplementary profit of 60-70%.¹⁵⁶ By mid-century Godinho has calculated that the Portuguese Crown was winning average profits of around 89% including *quebras*, ship losses, duties and administrative costs.¹⁵⁷ Nor was the Levant trade more propitious. On Alessandro Magno's trip to Egypt in 1560, he was content to return with a a 40% gain.¹⁵⁸

Initial returns on the Dutch and English voyages to the East Indies at the beginning of the seventeenth century were high, as high as 234% in the case of the East India Company between 1606-08, for their technological and organisational improvements to the supply route cut back costs and offset stagnant prices. But soon the Dutch were forced to cut down incoming quantities in order to keep the price from falling. The English East India Company watched its total profits drop steadily to 148% in 1611, to 87.5% between 1613-20, while in the 1680s the company could expect a stable annual return of perhaps 20-25% in relation to the cost of its goods.¹⁵⁹

There are a number of possible ways we can explain the dynamic behind the trends that we have sketched. The standard response of the economic historian is to suggest that spices were a relatively income inelastic consumer good when compared to the apparently

¹⁵⁵ BARROS, *Asia, dos Feitos que os Portugueses Fizeram no Descobrimento e Conquista dos Mares Terras do Oriente*, Decada I, Part II, 7; the post-1505 profit calculation has been made by K.S. MATHEW, *Portuguese Trade with India in the Sixteenth Century*, 197, but Gino LUZZATTO, 'Spezie' in *Enciclopedia Italiana di Scienze, Lettere ed Arte*, vol. XXXII, 368, concords.

¹⁵⁶ F. HÜMMERICH, *Die erste deutsche Handelsfahrt nach Indien*, 142; the Sernigi expedition is reported in Francesco GUICCIARDINI, *Opere inedite* . . . , ed. P. Conti e L. Guicciardini, Firenze, (1857-67), vol. VI, 220.

¹⁵⁷ GODINHO, *Os Descobrimentos e a economia mundial*, vol. II, 46 ff.; *L'Economie de l'Empire Portugais aux XVe et XVIe Siècles* (1969), 638-41.

¹⁵⁸ Magno's trip is presented by Frederic LANE. 'The Medieval Spice Trade. Further evidence. .', repr. in M. PEARSON ed., *Spices in the Indian Ocean World*, (1996), #6, 111-113, from Magno's diary, kept in Folger Shakespeare Library, Washington D.C., MS. 1317.1.

¹⁵⁹ CHAUDHURI, K.N., *The English East India Company: The Study of an Early Joint-Stock Company, 1600-1640*, London (1965); the last statistic is cited by Ralph DAVIS, 'Comparative advantage of the Levant and Cape routes to India in the sixteenth and seventeenth centuries', in *Atti delle 'Settimane di studio' ed altri convegni*, Istituto Italiano di Studi Storici e Economici, Roma, 1960, pp. 140-141.

limitless market demand for textiles.¹⁶⁰ But the former is often little more than a supposition grounded upon the current assumption that spices are simply a colourful peripheral to culinary art, and does not stand up to analysis. In Schokkaert and Van der Wee's work on the commodity price series of the Béguinage of Lier between 1526-75, spices fall into the category of 'commodities with high income elasticity and with high price elasticity', even if markedly less responsive than, say, wine.¹⁶¹ In any case, arguments for inelasticity do not at heart take into account or seek to explain why, for example, spices gradually lost their role at the forefront of the consumptive western aesthetic in its broadest sense or as the underpinning of the western pharmacopeia over the course of the early modern period. Then, to suggest, as Kriedte does, that the new products that replaced the classical spices were supply-manipulated in that the new products could all be mass produced on the back of plantation-based slave labour is forcing the point; under the Dutch, spices too were largely produced under such circumstances if we are to follow Hanna's description of slave populations from East Africa, Persia, Bengal and Japan imported to the Moluccas and set to work under Dutch settlers in the harsh circumstances of Jan Pieterszoon Coen's governorship (1619-23, 1627-29)¹⁶²

I would prefer to argue that the changes at the economic level, such as we have observed, were rooted in a slow-changing culture of European demand, which had its own social dynamics, but which in part responded to the process by which spices were demystified as a consumptive good by the search for new exotics, both practical and fashionable. We have already charted this demystification in Chapter 9; the rest of this chapter is given over to situating this demystification within wider changes of taste, tracing the changes in the domains in which spices were traditionally applied - pharmaceutical, alimentary and aromatic - which was largely a question of the substitution of spices by a new corpus of products, whether scientifically proven to be more efficient or simply reflective of cultural priorities.

The trend away from those exotic spices on which this thesis has concentrated began first and foremost with the lore contained within printed pharmaceutical compendiums and

¹⁶⁰ see, for example, David ORMROD, 'Northern Europe and the Expanding World-Economy: the Transformation of Commercial Organisation, 1500-1800' in *Prodotti e Tecniche d'Oltremare delle Economie Europee, secoli XIII-XVIII*, the XXIX Settimana di Studi, Prato, 1997.

¹⁶¹ E. SCHOKKAERT & H. VAN DER WEE, § Conclusion, 'A Quantitative Study of Food Consumption in the Low Countries during the Sixteenth Century', *Journal of European Economic History*, vol. 17 (1), 1988.

¹⁶² Willard A. HANNA, *Indonesian Banda: Colonialism and its Aftermath in the Nutmeg Islands*, Philadelphia (1978).
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thus, by extension, their position within western medicine. On the one hand, a new pharmacopeia re-emerged from a hazy classical precedent, the traditions of *euporista* or *parabilia*, dedicated to practical remedies easy to procure locally. This tradition was passed on, indeed rekindled within the scheme of the ‘homish apothecaries’, targetted at country folk isolated from markets sizeable enough to harbour the standard exotics, housewives’ guides such as the *Maison rustique des dames* by Madame Millet-Robinet, or the medicine books aimed at the poor, which had their own roots in the *Thesaurus pauperum* of Peter of Spain, written in the thirteenth century.¹⁶³ To summarise the standard precepts of this tradition:

One needs to make sure not to seek out any but remedies that are easy to take, easy to prepare and of little cost. These are by no means less good; and experience demonstrates daily that the simplest and the commonest often produce the best effects.¹⁶⁴

Here the printing press played a hugely important role in the democratisation of medical practice through the torrent of tracts and self-help manuals that gave voice to popular medicine and enshrined it in written text.

But it would be too hasty to interpret the overthrowal of the classical spices through a revolution ‘from below’. Many of the scientific writers who, just a few generations earlier, had mouthed scholastic hostility towards the ‘superstitions’ of rustics, farmers and craftsmen now actively sought out the secrets of knowledge from ‘poor women, artificers, peysantes, and all sortes of men’.¹⁶⁵ Indeed, the sea change seems to have stemmed from a whole-hearted disaffection and lack of conviction in the classical remedies on the part of those who had erstwhile been prescribed them. Montaigne questioned cynically whether:

If the nations from which we bring gayac, salseparilla and the esquine wood have doctors, how much is it due to the same validation of their strangeness, rarity and expense, that they have a field day with our

¹⁶³ see, for example, Jean PREVOST, *Medicina pauperum*, Francofurtum, (1641) and Paul DUBÉ, *Le médecin des pauvres*, (1669).

¹⁶⁴ ‘On doit donc avoir attention de ne chercher pour eux, autant qu’il est possible, que des remèdes faciles à prendre, faciles à préparer & de peu de depanse. Ces derniers n’en sont pas pour cela moins bons; & l’expérience prouve tous les jours, que les plus simples & les plus communs produisent souvent les meilleurs effets’, *Manuel des Dames de Charité, ou Formules de médicamens faciles à préparer, dressées en faveur des personnes charitables. . avec. . un traité abrégé sur l’usage des différentes saignées*, Orléans: N. Lanquement. (1747).

¹⁶⁵ EAMON, *Science and the secrets of nature*, 141; see also Jole AGRIMI & Chiara CRISCIANI, ‘Medici e ‘vetulae’ dal duecento al quattrocento: Problemi di una ricerca’, in *Cultura popolare e cultura dotta nel Seicento*, 144-159. Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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cabbage and our parsley'.¹⁶⁶

Voices had started to challenge the suitability of ancient medical prescription, often on empirical grounds, such as Dioscorides' instructions on the dosage of the purgative scammony. Explicit criticism of the authority of the classical fathers of medicine was carefully avoided by suggesting that they were writing for a different audience; in effect, the new writing carried through the long-standing notion of the contingency of pharmacological action, and that the physiology of the north European demanded a different pharmacopeia to that of an ancient Greek. There was no universal medicine. As Bright explains:

Our English bodies, through the nature of the region, our kinde of diet and nourishment, our custome of life, are greatly diuers from those of straunge nations, whereby ariseth great varietie of humours, and excrements in our bodies frō theirs, and so the causes of diseases rising vpon breach of diet (the diet being of another sort) must needes be vnlike, whereupon, although their humours be in kinde, and in a generalitie agreeable to ours.. yet rising vpon other matter than the same in vs, and otherwise framed by a farre other state of bodie, by reason of a diuers kinde of life, the Medicines which helpe them must needes hurt vs, not finding the like causes to striue with.¹⁶⁷

Bright, following Paracelsus' account of the Creation and constitution of the world apparent in his *Philosophy to the Athenians*, appeals to both natural law and the 'wisdome of God' in consequently developing the idea of synonymy of disease with available remedy.' There is no nation vnder heauen so poore and destitute, but it hath of the owne cuntry soyle sufficient to content nature with of foode and apparell.. so from them are taken the meanes of preseruation of health'.¹⁶⁸ He goes on to address precisely which domestic plants can substitute those of the East, and where he cannot, he exhorts 'men of wisdome' to carry forward 'this enterprize of examining and trying out natiue simples, [so that].. we shoulde no more be destitute of spices the~ *India* or *Arabia*'.

While such men as Nicholas Culpeper promptly carried the project forward, culminating in the enormously successful *The English Physician with 369 medecines made*

¹⁶⁶ 'Si les nations desquelles nous retirons le gayac, la salseparille et le bois d'esquine ont des médecins, combien pensons-nous, par cette mesme recommandation de l'estrangeté, la rareté et la cherté, qu'ils facent feste de nos choux et de notre persil', Carmélia OPSOMER, 'Une médecine sans épices', in *C.G.E.R.* (1992), pps. 57-59.

¹⁶⁷ Timothy BRIGHT, *A Treatise, wherein is declared the sufficiency of English medicines for cure of all diseases, cured with medicine*, (1580).

¹⁶⁸ exactly the same line is taken in John RAY, *The Wisdom of God Manifested in the Works of Creation*, London (1704), 13. Halikowski-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580 European University Institute

of English herbs that were not in any impression until this, the official pharmacopoeias were swollen equally with a large number of new and esoteric animal products, from the heart of stags, frog spawn, crayfish eyes, bulls' penises, flesh of vipers, nest of swallows, oil of foxes (*oleum vulpinum*) etc., abominations tinged with the seventeenth century craze for the occult and widely used as plasters, ointments and oils after being incinerated.¹⁶⁹

But the shift towards indigenous natural remedies might be seen as indicative of Europe's growing self-confidence regarding its own medicinal tradition and culture generally. Works such as the physician Symphorien Champier's *Myroel des Apothecaires* (1513) explicitly combined a rejection of Arab authorities with the promotion of native plant remedies. In Bright this took on all the overtones of religious bigotry:

Nay, which is yet more absurde, that the health of so many Christian nations should hang upon the courtesie of those Heathen and barbarous nations, to whome nothing is more odious than the very name of Christianitie?

This position was further encouraged by the prevailing mercantilist critique of the import of luxuries as frivolities nefarious to national balance of payments, and the cultivation of simplicity among the reformatory religious movements of the sixteenth century culminated in the ultimate position, similar to that current in Republican Rome of the third century B.C., according to which spices were denounced as 'rather of superfluous pleasure than necessarie reliefes, and seruing rather for a certaine pompe, then for maintenance of life'.

Bright was writing within a tradition rooted in the radical new departures in medical thinking orchestrated by the Swiss physician Theophrastus Bombast von Hohenheim (a.k.a. Paracelsus, 1493 - 1544) - the so-called Paracelsian revolution - which had started with the rejection of foreign drugs. His had been the conviction that every region of the world had its own autochthonous diseases and cures.¹⁷⁰ But Paracelsus and his apostles, Oswald Croll, Conrad Gesner etc., who were responsible for publishing much of Paracelsus' work in the 1560s and 1570s, actively brought with them a new science. 'Chemiatrie' was founded upon the doctrine of Tria Prima, the three principles of mercury (liquidity and volatility), sulphur (combustibility) and salt (stability and solidity), which Paracelsus regarded as the trinity not so much of elements in the Aristotelian tradition, but the active principles of creation

¹⁶⁹ *London Pharmacopeia*, second edition, (1618), repr. in facsimile, Madison (1844); EAMONN, *Books of Secrets*, especially ch. 6, 'Natural Magic and the Secrets of Nature'.

¹⁷⁰ most clearly expressed in a document in the Breslau city library quoted in OESTERLE, *Die Anthropologie des Paracelsus*, Berlin (1937), 138; also *Paracelsus, Sämtliche Werke*, ed. Sudhoff, Munich (1929), vol. XI, 26-27. Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580 European University Institute

underlying the phenomenal world. These principles, then, whilst continuing to operate within a theoretical scheme that retained the notion of disease as imbalance and the fixation with a generative life-spirit or *archaeus*, if rather more chemical-physiological than vitalist, underwrote a rejection of Galenic humours for a new 'spagyric' pharmacopeia of 'stronger' remedies that sought to confront nature, interpreted as chemical abnormalities, with various inorganic substances, often chemically derived, particularly metals, but also tinctures, extracts and essences. They were 'chemicals' in that they were substances that had been transformed by the art of mixing and separating, often with the aid of fire, but with little of the chemical reaction we would understand today. The separation of the pure from the impure was perhaps the overriding goal of these experiments, the essential qualities of the drug thought to reside in its spiritual, as well as chemical, 'quintessence'. In this sense, if something of a new departure within the Latin tradition, in that alchemical writings had largely faded from view over the course of the fifteenth century, the Paracelsian revolution built on the long-standing Arabic alchemic search for elixirs (*al-iksir*) possessing the supreme medicinal property of inducing long life, even immortality, which was passed on through the writings of the Catalan mystic John of Rupescissa (fl. 1340-50).¹⁷¹

The Paracelsians developed distillation techniques that were suitable for volatile substances, and which led to a burst of enthusiasm for alcohols, spirits, essences and oils. Distillation of minerals such as alum, vitriol, ammoniac and common salt, and latterly saltpeter and sal ammoniac, yielded the discovery of mineral acids. Finally, metallurgical advances and the vigorous efforts of various scholars, merchants and miners for samples of unknown minerals from all parts of the world, provided supplies of mercury, antimony and lead, and lesser amounts of arsenic, iron, gold, copper, cobalt, bismuth and zinc. After often time-consuming laboratory experiments, new compounds such as the corrosive mercuric sublimate and calomel were formulated. These were some of the directions reflected in the distillation books of Brunschwygk, Paracelsus' *Archidoxies* and Andreas Libavius' *Alchimia* (1597), which is often taken to be the first textbook of chemistry.

The seventeenth century saw the entrenchment of the so-called iatrochemical school of medicine with important texts such as Jean Baptiste van Helmont's *Ortus Medicinae* (Amsterdam, 1648), while the German physician and teacher, Franciscus Sylvius (1614-72), refined the theory of disease as chemical imbalance of all important acids and alkali in the body, which he believed to be influenced by all sorts of fermentations provoked by the

¹⁷¹ John of RUPESCISSA's chief work has been published in English as *The Booke of Quinte Essence*, repr. Halkovle Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580 London (1856)
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ingestion of food, body temperature and vital spirit. This line of investigation led him, if on erroneous premisses, to an accurate description of the nature and function of the body fluids, especially blood, lymph, pancreatic juice and saliva. In a parallelism of Galenic pathology, Sylvius insisted that illness, or acrimony, stood for an excess of either alkalinity or acidity, whether in quantity or quality, which could be restored by chemical drugs of a contrasting nature.¹⁷²

For most parts of Europe, however, it would be true to say that the Paracelsian revolution started off as little more than an esoteric alchemical passion. A study of the *Pharmacopeia Augustana* of 1564 reveals to what extent it follows the traditional pattern of Greek and Arab medicine with no notice of the chemical remedies of the Paracelsians.¹⁷³ These only gradually infiltrated official dispensaries over the course of the seventeenth century in both East and West. Then, chemical or chymiatric medicines supplemented rather than replaced available vegetal remedies. The *Pharmacopoeia Londoniensis* of 1618 included Paracelsian remedies such as *Crocus metallorum* 'that they might be a servant to the dogmatic medicine' and, elsewhere, 'that they might act as auxiliaries'. Indeed, Paracelsians such as Hartmann, *docente* at the Kassel Court, specifically sought not to negate Galenic medicine, but to unify it with spagyric remedies.¹⁷⁴ So, the two traditions co-existed. The syphilis cure, by way of example, was actively sought in both the vegetal and chemical domain.¹⁷⁵ As if to represent this, the frontispiece of the *Leipziger Arzneytaxe* of 1689 portrayed the physician symbolically flanked by the two figures of Paracelsus and Hippocrates. In France, however, the issue unleashed a vituperative academic dispute between the Paracelsian inclined University of Montpellier and the more reactionary University of Paris, which stood true to Galen.

Dispensaries were rapidly swollen by such parallelism; the 1100 medicaments included in the first edition of the *Pharmacopeia Augustana* (1564) came to be superseded

¹⁷² Allen DEBUS, *The Chemical Philosophy: Paracelsian Science and Medicine in the Sixteenth and Seventeenth Centuries*, New York (1977); 'The Impact of Paracelsians', in David L. COWEN & William H. HELFAND, *Pharmacy. An Illustrated History*. SYLVIUS' principal works were *Praxeos medicae idea nova* (1671) and *Opera medica* (1671). See H.E. SIGERIST, *Great Doctors. A biographical history of medicine*, (1933).

¹⁷³ *Pharmacopeia Augustana* (1564), facsimile with introductory essays by Theodore HUSEMANN, E. KREMERS ed. Madison (1927).

¹⁷⁴ Bruce MORAN, *The Alchemical World of the German Court: Occult Philosophy and Chemical Medicine in the Circle of Moritz of Hessen (1572-1632)*, Sudhoffs Archiv, Beiheft 29, Stuttgart (1991).

¹⁷⁵ see Teodoro PENNACCHIA, *Storia della sifilide*, Scientia veterum series, no. 17, Pisa: U. Giardini, (1961). Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580 European University Institute

by an exhaustive litany of 1952 different drugs and formulas contained in seventeenth century pharmacopeia such as the *Pharmacopeia Wurtembergica* of 1741 or the *Dispensatory* of Jean de Renou, which came out in a translated edition in London in 1657. It was only over the course of the eighteenth and nineteenth centuries that the 'classical' spice remedies were systematically weeded out.

The Paracelsian revolution, then, whilst perhaps failing to sweep away the classical pharmacopeia definitively, entailed huge consequences for medicine by setting in train a process by which the natural pharmacopeia came eventually to be supplanted with the artificial, a triumph of manufactured drugs.¹⁷⁶ The development of scientific chemistry from the early nineteenth century progressively replaced botanical drugs by single-acting chemical drugs and even threatened to eliminate the former entirely by a modern materialisation of the Paracelsian idea of the 'essential'. The vegetable drugs, whose usefulness was too obvious to be denied, were investigated chemically in order to isolate and identify their active constituents and finally to synthesize them. Alkaloids, glucosides, vitamins and hormones are among the most important results.¹⁷⁷ Ramifications of this process were felt as far afield as the social domain. Apothecaries were gradually replaced by druggists and, as we still appreciate today, professional chemists.

If spices were victims, in the long run, of the developments within the western pharmacopeia, so too were they persecuted within the aesthetic realm by the evolving notion of taste. As I have suggested elsewhere, there is almost certainly some symbiosis, if a little unclear as to exactly how it functioned or how it can be accounted for, between these 'functional' and 'aesthetic' domains of medical and alimentary usage. As far as the chronology is concerned, if we have to await eighteenth century France for the explicit formulation of 'good taste' (*bon goût*) as a set of aesthetic choices for entrance into polite society, we can nevertheless appreciate the origins and evolution of such a process much earlier. Indeed, the historical sociologist Norbert Elias would be keen to extend 'the civilising process' as far back as the rupture with the culture of the Middle Ages. The rise of the notion of good taste, as Flandrin has shown, was symbiotic with the crumbling of the medieval preoccupation with dietetic oppositions for health purposes.

Substantively, this process included the rejection of the putative harshness and

¹⁷⁶ A.G. DEBUS, 'The Impact of Paracelsians', in *The Chemical Philosophy* .. (1977) and R.P. MULTHAUF, 'Old Drugs in New Bottles' (*Pharmacy: An Illustrated History*), BMSS.

¹⁷⁷ KREMER & URDANG, *History of Pharmacy*, Philadelphia, (1946) and 4th edition, revised by Glenn Halikowski-Smith, Stefan Portugal and the European Society of Pharmacy, (1986), 49 ff.
 Sonneck, Madison, American Institute of the History of Pharmacy, (1986), 49 ff.
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incivility of the medieval palate along with the 'squalid' dinner habits and quantitative excess that had accompanied it: it was a self-conscious distancing from the culture of the immediate past, very much in keeping with Renaissance prejudices. Despite the pronounced cultural distinctions, greatest perhaps between North and the South, it was, again like the Renaissance itself, by and large a movement universal to Europe, if evolving at very different rates and with many specific loopholes and contradictions. And here, what one ate at table was only one of a gamut of cultural leads taken by Italy, that nation 'emphatically and wholly committed to aesthetic values', which the rest of Europe in greater and lesser capacity followed up.¹⁷⁸

The winds of change are conventionally accorded the gastronomic treatise entitled *De honesta voluptate ac valetudine*, written by Platina - alias Bartolomeo Sacchi - originally published in 1474-5 and rapidly translated in repeated editions into the principal European vernaculars: 'one of the works, which most influenced the West', in the opinion of Igor de Garine.¹⁷⁹ The text's precepts were taken up by the Florentine 'de la Marmite' gastronomic academy and, via Medici patronage, reflected or helped introduce 'a refined and direct style of eating, using fresh food and salads, the precocious precursors of *nouvelle cuisine*'.¹⁸⁰ The Medici connection was henceforth crucial for the diffusion of the new precepts via that family's presence on the French political scene, as it was for novel forms of cultural expression such as ballet, and ideals of courtly refinement and elegance manifest in the new fashions in interior decoration, ballet and artistic representation.¹⁸¹ Through the Medici, once lowly vegetables such as lettuce, spinach, artichoke, cauliflower, beans, tomatoes and chilli

¹⁷⁸ Luiz Diez DEL CORRAL, *El Rapto del Europa*, trans. (1959), 232.

¹⁷⁹ Bartolomeo PLATINA's *De Honestae Voluptate* (1475), translated by Elisabeth B. Andrew as *On Honest Indulgence and Good Health* (1967). It is also discussed by Anne WILLAN, *Great Cooks and their Recipes: from Taillevent to Escoffier*, London (Elm Tree Books: 1977). Otherwise, Igor de GARINE, 'Modes alimentaires', in J. POIRIER ed., *L'Histoire des Moeurs*, (1990-1), I, 1586 ff.

¹⁸⁰ Igor de GARINE. *ibidem*.

¹⁸¹ Within the artistic domain, we can perceive this through the eager invitations and commissions the French monarch François I granted Leonardo da Vinci, Andrea del Sarto and Benvenuto Cellini; in the sumptuous fittings made for the Fontainebleau palace interior in the 1530s and '40s by the Italian Mannerists Rosso and Primatice; and in the portraiture tradition, otherwise so recently invigorated by northern artists such as Holbein. Nowhere outside France was the Italian influence more keenly felt and incorporated within the national tradition. We see this in the sculptures of Jean Goujon (d. 1516), the work of the court artist Jan Gossaert alias Mabuse (1478-1532), and, into the next generation, the etchings of Jacques Callot (1592-1635). E.H. GOMBRICH, *The Story of Art*, Phaedon Press, London (1995), 356, 379, 384; *Peinture Française des XVe-XVIIe siècles*, Musée de l'Ermitage, ed. d'Art Aurore (1973).

The French court excitedly adopted ballet from Italy, where it was set to opera by Lully and took off in a big way under Louis XIV. Iain FENLON, 'The origins of the seventeenth century staged ballo', in FENLON & CARTER (eds), *Staging the Italian Opera*, Cambridge University Press, 1995, pp. 158-164.

peppers found their way from Italian vegetable gardens into the French courtly repast. And Paris gradually became the directing epicentre of what constituted good taste. As the preface to the *Dons de Comus* (1739) explained:

The Italians have made the whole of Europe more polite, and it is they without exception who have taught us how to eat. . We in France have known refined cuisine for more than two centuries, but one can be sure that it has never been so delicate, nor have we ever worked as properly or with such fine taste.¹⁸²

Of the keynote texts announcing the new standards might be singled out the *Cuisinier Français* of François de la Varenne (1651), though he was swiftly followed up by a shoal of writers and commentators known sarcastically as the 'École des officiers de bouche' and whose views were transmitted through such principal texts as *Le Cuisinier* of Pierre de Lune (1656), *L'Art de bien traiter* (1674) and Massialot's *Le Cuisinier royal et bourgeois* (1691).¹⁸³

The new taste fairly smartly consigned the 'choleric' spices such as pepper - condemned by J.P Marana at the end of the seventeenth century as the 'spices from hell' (*épicerie d'enfer*), and according to Alexandre Dumas (1802-70) 'a rude spice' (*une épice grossière*) - but also the favoured ginger and saffron, to the rubbish bin of defunct medieval culture and, in the eyes of the Abbé Raynal writing in the 1770s, barbarian gluttony and cult of excess.¹⁸⁴ The path to such a position, it would appear, had been laid by the denunciations of luxury and consumptive decadence made by the spokesmen of the German Reformation and, in England, by the Puritans for, as Flandrin has established, the seventeenth century fixation with gluttony was a moral invention that can be placed alongside the censure of such practices as kissing in public.¹⁸⁵ It seems more difficult to endorse what Michel

¹⁸² 'Les Italiens ont poli toute l'Europe, et ce sont eux, sans contredit, qui nous ont appris à manger [...]. Il y a cependant plus de deux siècles qu'on connoît la bonne cuisine en France, mais on peut assurer sans prévention qu'elle n'a jamais été si délicate, et qu'on n'a point encore travaillé ni si proprement ni d'un goût si fin', xii-xiii.

¹⁸³ Jean-Louis FLANDRIN, 'La révolution culinaire du XVIIe', introduction to François de la VARENNE, *Le cuisinier Français*, ed. Paris (1983), 14.

¹⁸⁴ Alexandre DUMAS, *Le Grand Dictionnaire de Cuisine*, re-ed. Paris: Th. Veyrier, 1973; Abbé RAYNAL, *A Philosophical and Political History of the Settlements and Trade of the Europeans in the East and West Indies*, 2 ed., trans. French by J. Justamond, vol. I, bk. 1, 22.

¹⁸⁵ J.-L. FLANDRIN, 'La distinction par le goût. .', in Philippe ARIES & George DUBY ed., *Histoire de la vie privée*, Paris: Seuil (1985-7), vol. 3, 290. Such themes were closely linked to the mercantilist position as far as the political economy was concerned and which sought to minimise the expenditure of national bullion on the profligate luxuries of the East. Otherwise, Norbert ELIAS, *The civilising process: the development of manners, speech, and style* (2004), of conduct and feelings in society, 1911-1980, New York: Urizen books, (1978).
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Jeanneret has nicely observed as the repression and marginalisation of all this Renaissance exuberance to the 'fell swoop of classicism'.¹⁸⁶ Raynal's, then, was a typically moral vocabulary, one that set good taste and its concomitant qualities of *honestas* and *civitas* against the crude Rabelaisian instinct of the masses.

Traditional historiography would argue that, in place of the weight attached to the quantitative scale of eating and scale of spectacle, an obsession with abundance and satiation that we can appreciate from just about any description of a banquet supplied in the medieval chronicle, emphasis shifted to a qualitative expression of taste over this period.¹⁸⁷ Rather than having whole animals as large as calves served up at the banqueting table, tasty morsels and favoured cuts were pre-selected for the guests. Plates, like the tastes themselves, were changed regularly during the course of the meal: Belon declared that 'at a simple bourgeois meal you will see two, three or four dozen dirty dishes, enough to occupy two men for a day in cleaning them'.¹⁸⁸ The notion of primary tastes was expanded from the Aristotelian two (sweet and bitter) to as many as ten and, in the rationalising spirit of the *philosophes*, equated and assumed into the doctrine of 'proportions in the geometry of the spirit' (*proporzioni nella geometria dello spirito*).¹⁸⁹

Within this enriched scheme of taste, then, what emerged as the dominant aesthetic has been described as a 'mixed repertoire of tastes orchestrated upon variety and on the play of flavours that meet and chance upon each other but are not blended' (*sfumata tastiera di*

¹⁸⁶ Michel JEANNERET, *A Feast of Words. Table Talk in the Renaissance*, Polity Press: Cambridge, (1991), 4.

¹⁸⁷ BRAUDEL, *Civilisation matérielle, Economie et Capitalisme*, (1966), 139; N. WHEATON. *Savouring the Past...* See, for example, Garcia de Resende's account of the wedding feast of D. Afonso in his *Crónica de El Rei D. João II*, ed. Biblioteca dos Classicos Portugueses, Lisbon (1902), vol. II, cap. XXIV, 88-90 and CXXV, 90-92. We are tempted to distinguish, as its defining characteristics, that of *spectacle* ('e a copeira era coisa espantosa a ver.. e traziam [numa grande carreta dourada] dois grandes bois assados inteiros, com os cornos e mãos e pés dourados..'); *noise* ('e o estrondo das trombetas, atambores, charamelas e sacabuxas, e de todolos ministréis era tamanho que se não ouviam, e isto se fazia cada vez que El-Rei, a Rainha, e a Princesa bebiam..'); and *magnanimity* ('E toda a gente da corte e da cidade que estava em pé entre as grades, que era muita, todos comiam de que se tirava das mesas, que era em tanta abundância que muito mais era o que sobejava que o que se comia.. que certo foi em tanta abastança e tanta perfeição, tanta honra, tanto estado, quanto no mundo podia ser.')

The orthodoxy has been challenged by Jean-Louis FLANDRIN who, counting the dishes presented between the *Menagier de Paris* (c. 1393) and Massialot's *Le Cuisinier royal et bourgeois* (1691), contests the down-grading of the quantitative element in eating habits and suggests that medieval feasts had less to do with the finesse or vulgarity of prevalent tastes than with the competition for social prestige, 'La distinction par le goût', in ARIES & DUBY, *Histoire de la vie privée*, III, 282.

¹⁸⁸ Pierre BELON, *L'Histoire de la nature des oyseaux, avec leurs descriptions et naïfs portraits retirez du naturel*, ed. Paris (1955), 62.

¹⁸⁹ *Handbook of Sensory Physiology*, vol. IV, part 2, 'Basic Dimensions of Taste in Man'; for the pretensions of a *philosophe* of taste see, for example, ALGAROTTI. 'Pensieri diversi', in his *Opere*, Venezia (1792), t. VII, 57.

gusti orchestrata sulla varietà e sul gioco dei sapori incrociati e accostati ma non amalgamati), in which the delicate and the sensitive were prioritised.¹⁹⁰ Thus, as far as spices are concerned, the ‘violent flavours’ (*sapori violenti*) of the hot spices were curtly rejected, as were the binges on flamboyant *pots pourris* of little individual distinction. The more curious and esoteric spices that had served to exoticise such concoctions fell out of use – grains of paradise, long pepper, galangal. The seventeenth century, rather, laid emphasis on the delicate consumption of ‘fine’ spices, which managed to linger on, particularly in the repertoire of dessert recipes with its delight for sugared pastries and intricate confectionery.¹⁹¹ Indeed, Flandrin has shown that if cloves figured in only 4-16% of recipe literature in the fourteenth and fifteenth centuries, they are present in around 40% of recipes contained in La Varenne’s *Le Cuisinier Français* of 1661. Cloves, from the time of the thirteenth-century *Viandier de Taillevent* tended to be accompanied by cinnamon, which figured in as many as 62% of Messisbugo’s recipes in 1549.¹⁹² Nutmeg, too, appeared for the first time in more than 40% of recipes with Lancelot de Casteau’s *Ouverture de cuisine* (1694), while the subtle, sweet, aromatic flavour of vanilla spread rapidly across Europe from Spain during the last third of the seventeenth century. The commercial success of ‘fine’ spices over the rocky seventeenth century, then, manifest in buoyant prices (see Graph 7), can be traced back to their apparent wave of popularity exemplified in such cooking treatises. It provided Nicolas Boileau (1636-1711) with a subject for one of his famous satires: ‘You like nutmeg, it’s put on everything!’ (*Vous aimez la muscade, on en a mis partout!*).¹⁹³

New sensibilities promoted the development of *cuisine au beurre*, the construction of elaborate sauces, the ‘marriage’ of drink to the chosen food and colour to its taste, the tendency to separate the sugared from the salted and moderate the intake of acids. Its precepts lay strongly with ‘natural’ flavours. Writers like Nicolas de Bonnefon(u)s, author of *Délices de la Campagne* (1654), led a campaign against ancient practices that *dénaturaient*, or

¹⁹⁰ Piero CAMPORESI, *Il brodo indiano. Edonismo ed esotismo nel settecento*, Garzanti: Milan (1990), 7-10.

¹⁹¹ see P. GILLET, *Par mets et par vins. Voyages et gastronomie en Europe, XVI-XVIII siècles*, Paris (1985), 157-167.

¹⁹² the thirteenth century *Viandier* is discussed in *L’Histoire*, no. 61, p. 93; Cristoforo da MESSISBURGO’s *Libro Novo nel quale si insegna il modo di ordinare banchetti, apparecchiare tavole etc.* first appeared in Venice in 1491.

¹⁹³ BOILEAU, ‘Le Repas ridicule’, *Satire III*, line 119, (1664–end 1665).

disguised tastes, such as by spicing them heavily, over-cooking and adding superfluous ingredients.¹⁹⁴ Instead, popular texts such as Thomas Tryon's *Treatise of Cleanliness* (1682) and his *Way of Health* (1683) promoted 'the Lovers of Wisdom and Health to the more innocent use of *Grains, Fruits and Herbs*'. The tendency towards naturalism in taste, then, instead of spices promoted the use of domestic seasonings, not necessarily the ones used in the medieval kitchen like mint and hyssop, but new ones like chervil, tarragon, basil, and especially thyme, bay leaves and chives. Parsley became very popular almost universally, as did a number of alliaceous root seasonings (onion, shallots, Spanish garlic) and new categories, such as *condiments de Provence*, constituted of capers, anchovies, olives, lemons, sour and Seville oranges, made themselves felt. Many of these seasonings tended to go better with a lighter diet, which is reflected in conclusions drawn from research on the long term changes in food habits indicating a general decline of meat consumption between 1500 and 1650 and its substitution by bread as staple.¹⁹⁵ A lot of emphasis was given over to floriate perfumes, not merely to disguise unpleasant bodily odour, but as an alimentary enhancer; extracts of amber, iris and rose-water, orange petals, even flowers of nutmeg invaded cuisine, stews, pastries and sauces.¹⁹⁶ Finally, one might comment how the tradition of expressly colouring dishes, through the use of substances such as saffron to attain a yellowish effect, cedar a vermillion, and orchanet (also known as Bugloss of Languedoc) a dark red, and especially substances which would have significantly altered the overall taste of the dish such as lapis lazuli, gold leaf and silver leaf (or tin), died out; that by the eighteenth century, colour was of interest 'for what it revealed of the nature and taste of the foodstuffs' ('*pour ce qu'elles révélaient de la nature et du goût des aliments*').¹⁹⁷

But the process by which this new set of aesthetic priorities was translated into

¹⁹⁴ a line of critique aimed at 'disguised', 'titivated' and 'complicated' foods can be traced through P. BOAISTUAN, *Le Théâtre du Monde* (1558), as well as A. DU VERDIER, *Les diverses Leçons: contenant plusieurs histoires, discours, et faits mémorables; Recueillis des auteurs Grecs, Latins, et Italiens*, cap. 23, Lyon (1592) and L. FIORAVANTI, *Miroir universel des arts et sciences*, trans. P. Cavellat (1586), I, 10.

¹⁹⁵ A. FENTON, E. KISBÁU eds., *Food in Change. Eating Habits from the Middle Ages to the Present Day*, especially article by Günter WIEGELMANN, Edinburgh (1986) from conclusions pioneered by W. ABEL, 'Wandlungen des Fleischverbrauchs und Fleischversorgung in Deutschland', *Bericht über Landwirtschaft*, ns. 22, 1938, 411-52. These are contrary to those findings of the VI^e séction of the Ecole Pratique des Hautes Etudes published in the *Annales (E.S.C.)* between 1958-65, as reported by Pierre CHAUNU, *European Expansion in the Later Middle Ages*, (1979), 298.

¹⁹⁶ Fernand BRAUDEL, 'The decline in the vogue for pepper after 1650', *Capitalism and Material Life*, Fontana (1974), 152-155; Jean Louis FLANDRIN, 'La révolution culinaire du XVII^e siècle', introduction to François de la VARENNE, *Le cuisinier Français*, ed. Flandrin, Paris (1983).

¹⁹⁷ J.-L. FLANDRIN, 'La distinction par le goût', in ARIES & DUBY, *Histoire de la vie privée*, (1985-7), vol. 3. Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580 European University Institute DOI: 10.2870/92585

practice, particularly in the colder reaches of Europe far from the dictate of culinary fashion, was a very gradual one. It took some of the new arrivals, such as chocolate, almost two hundred years to arrive from Spain, where the product was already circulating in the 1520s, to Scandinavia and Russia. In 1648, Jean Le Laboureur could still complain that the *pâtés* at the Polish court were ‘all black inside from the spices and saffron’ (*tout noirs au dedans d’épices et de safran*). And a hundred years later, we find the same critique in even stronger terms: the Abbot Mably ate a meal in Krakow in 1776 which he described as ‘a most copious meal, and which might have been very good had the Russians and Confederates destroyed all the aromatic herbs that they use lavishly here. . . and which poison travellers’.¹⁹⁸ Differences in taste in these instances would seem to reflect, at least in part, a conflict of social values; for while the French were cultivating their sensibilities, sense of aesthetic and application of reason, the Poles, hemmed in tight against the Turk and struggling to sustain the *antemurale Christianitatis*, or the bulwark of Christendom, vaunted their ‘marshal valour, fierceness and prowess’, reflected at the dinner table in what would, to the French, have seemed just those medieval values of impulsiveness and excess.¹⁹⁹

Just as much as the impact of the new taste differentiated itself spatially, so too did it permeate society at different speeds. Or rather, we probably cannot understand the discourse of refinement and *savoir-vivre* without its distancing from the ignorance and vulgarity of the alimentary habits of the masses. Flandrin has commented on the gradual segregation of the company of diners, the banishment of the servants from the common table. Equally, Alfred Franklin has, from his study of civility treatises, noted the rise of the figure of the rustic (*le rustre*) as a figure of contempt only from the sixteenth century.²⁰⁰ Boileau’s satire, for example, was aimed specifically at the *cuisine fruste des auberges*, the unpolished fare of the inns. Thus, accordingly, while pepper only figured in 20% of Varenne’s recipes in 1661, *La Nouvelle Maison Rustique*, a housewife’s handbook published in 1755, registered pepper in

¹⁹⁸ ‘un repas fort abondant et qui peut-être aurait été fort bon si les Russes et les Confédérés avaient exterminé toutes ces herbes aromatiques qu’on prodigue ici. . . dont on empoisonne les voyageurs’, cited by Fernand BRAUDEL, *Civilisation matérielle, économie, capitalisme*, Paris (1979), t. I, 188-91. Heinrich MAURUSCHAT, in his analysis of German cake recipes, suggests that the application of spices diminished markedly between the *Leipziger Kochbuch. . .vorgestellet von S.E.*, Leipzig (1706) and the *Neues hannöversches Kochbuch, in zwey Theilen* (3 Aufl.) of Hannover (1803), *Gewürze, Zucker und Salz im vorindustriellen Europa.*, 162.

¹⁹⁹ Giovanni BOTERO, *The Travellers Breviat*, (1601), 84. Efforts have been made to wed the aesthetics of culinary taste and feminine beauty, for example. Thus, the pudgy archetypal Rubens model has been associated with the prevalent taste for *les sauces grasses*, Jean-Louis FLANDRIN and Marie-Claude PHAN, ‘Les métamorphoses de la beauté féminine’, in *L’Histoire*, no. 68, pp. 50-57.

60% of its recipes.²⁰¹

At the same time, we can trace the explosive ascent of new products imported from the overseas colonies. These were most notably coffee (which from the time of Linnaeus' *Hortus Cliffortianus*, published in Amsterdam in 1737, adorned frontispieces as the chosen symbol of Asia), tea, chocolate, sugar, and tobacco. These eclipsed, and must be considered in large part the direct successors of the traditional spices for their luxurious, incidental, stimulative and comestible properties. Indeed, the old and the new were often consumed together, as Pierre Pomet attests for the mixing of cinnamon with coffee-drinking ('*setzt man Zucker zu, zuweilen auch Gewürz und Zimt*') and Morineau, the consumption of cinnamon with chocolate in New Spain.²⁰² But they were not spices; as I have maintained from the outset, by the sixteenth century spices were a closed group. With the explosion of new commodities brought into Europe with the Discoveries and European expansion, the old categories were broken down, reformulated, and new ones invented. In the case of these new products mentioned above, no collective name arose. So that in discussing them historically, we are obliged to create our own vocabularies, which in the German literature has tended to be that of *Genußmittel* or simply luxuries, while the Anglo-Saxon speaks of these goods currently as 'colonial groceries', referring to the grocers that were increasingly responsible for their sale.²⁰³

Can we build a bridge between the arrival of these new commodities and the precepts of the new culture of taste? Historians have recently tried to situate the burst of enthusiasm for coffee and tobacco over the seventeenth and eighteenth centuries within the ongoing discussion provoked by Norbert Elias as to the long-term cultural changes affecting Europe and coined the civilising process. It has been postulated that they take their place in an emergent culture of 'sobering indulgence' (*nüchterne Räusche*), one that overthrew the excessively destabilising influence of alcohol consumption.²⁰⁴ Perhaps it is for this reason

²⁰¹ FLANDRIN, *ibid.*, 16.

²⁰² Pierre POMET, *Histoire générale des drogues*, Paris (1694), as cited in MÜLLER & PROKOP, 'Geschichte der Genußgifte', in M. AMBERGER-LAHMERMANN & D. SCHMÄHL, *Gifte. Geschichte der Toxicologie*, Heidelberg (1988), 266; M. MORINEAU, *Incroyables gazettes et fabuleux métaux.*, Paris (1983), 264.

²⁰³ J. BREWER & R. PORTER, *Consumption and the World of Goods*, London: Routledge (1993); Maxine BERG, 'Manufacturing the Orient. Asian Commodities and European Industry', paper circulated at *Prodotti e Technique d'Oltremare delle Economie Europee, secoli XIII-XVIII*, the XXIX Settimana di Studio, Prato, 1997, 3.

²⁰⁴ H. SPODE, 'Der große Ernüchterer. Zur Ortsbestimmung des Kaffees im Prozesse der Zivilisation', in D.U. BALIKOWSKI, *The phrase is that of Egon FRIEDEL*, *Portugal and the European spice trade, 1480-1580* European University Institute

that other products such as betel, chewed in the mouth alongside the areca nut for a strong stimulative effect, never took off in Europe. Besides this, it is noteworthy that these new products were consumed outside the sphere of the traditional meal; that they were taken either before, after or between meals, often in a different locale, indeed creating their own milieu such as the café, or coffee-house, with new accompanying forms of sociability. Also, perhaps, with the coming of the new social climate of work, that they were beverages easily prepared and swiftly consumed. There was, moreover, strong complementarity among this group of new products, particularly between tea and sugar, coffee and tobacco.

Within the world of *aromata*, or scents and perfumes, we can observe a similar trend away from the heavy base essences of medieval Europe that would once have been considered spices, particularly the animal products such as musk, civet and ambergris, inherited from Greece and Rome. By the late eighteenth century they had been almost completely eliminated, and were considered too strong, too animalistic, their 'excremental' odours repulsed rather than attracted. Part of this, undoubtedly, was fashion, which, in unison with culinary taste, started up in Italy over the course of the sixteenth century and was passed on to France, and was for delicate floral and herbal scents that could all be found locally, typically lavender, rosemary, violet, pine, thyme, daffodil and rose. Eighteenth century accounts recount how mouths, feet and private parts were washed in rose water and the breath was scented with iris paste, while the most popular commercial scents seem to have been the *poudre à la maréchale*, a judicious blend of iris, clove, lavender, rose, orange and marjoram put together by the Maréchal d'Aumont, and the *poudre d'oeillet*, of carnations, which enjoyed great favour during Louis XV's reign.²⁰⁵ As one reads in the *Encyclopédie*, 'Amber, civet and musk have fallen out of fashion ever since our nerves became more delicate' (*Ambre, civette, musc sont tombés de mode depuis que nos nerfs sont devenus plus délicats*).²⁰⁶

But the whole role of smell in society was revolutionised by the progress of pneumatic chemistry which, with Guyton de Morveau and Vicq d'Azyr in 1775, brought into question the sanitary qualities of aromatic fumigations, suggesting they were little more than a mask engendering no chemical 'transmutation' in the air. What followed was a systematic shift to chemical disinfectants, initially salt mixed with sulphuric acid and fumigations of muriatic

²⁰⁵ A. CORBIN, *Le miasme et la jonquille. L'odorat et l'imaginaire social, 18e-19e siècles*, (1982), 90; in the seventeenth century Pindaric ode of Lady Winchilsea (1661-1720) 'feeble brains. . faint beneath the aromatick pain' of daffodil scent (*jonquille*), 'The Spleen', in Charles Gildon, *A new Miscellany of original poems on several occasions.*., London (1701).

acid, as we see used in the project to clear the cellars of corpses of Saint-Étienne church in Dijon in 1773, but followed up with note by Semmelweis' injunction to doctors and midwives undertaking autopsies to use a chlorinated lime handwash instead of soap from May 1847, and the Englishman Lister's later introduction of carbolic acid in surgery in order to destroy pyogenic germs. Finally, with the culminating invention of chlorine, in hand with public projects devoted to paving, draining and ventilating, issues of public health were largely resolved.²⁰⁷ With the disappearance of a whole range of putrid smells, much of the rationale for scenting ourselves has disappeared for, as Corbin remarks, pharmacy has gone its own way from perfumery. It is within the logic of these developments that we have tended consequently to 'deodorise' rather than perfume ourselves.

The chemical revolution carried further changes in its train. Chemists have been increasingly able to reproduce 'natural' smells synthetically; with the cost savings implicit in these techniques, modern perfumes have, over the course of the last hundred years, ever more relied on fabricating these smells through approximations of compound synthetic chemicals, or even more boldly, devised entirely new fragrances, as we have seen with the case of ionone.²⁰⁸

But we would be unwise to take the argument of scientific revolution too far. Synthetic fragrances that mirrored natural ones consistently outperformed entirely novel ones, and even as late as 1979 consumers in Hungary were indignant that the fragrance for apple soap was being imported from abroad in a country awash with the fruit, when in fact it was an entirely synthetic essence that needed to be purchased with US dollars.²⁰⁹ At the same time, neither were the olfactory injunctions of the Enlightenment Age, which have by and large steered the perfume industry through to our own times, strong enough to banish spices so absolutely from the recent history of the perfume industry. The essential oils of lemongrass, sandalwood, cassia and anise have continued to exist alongside the favoured and highly expensive floral oils, as well as a number of resins, especially labdanum, in that it yields an important fixative called ambrein. Those erstwhile maligned animal products - musk, civet, ambergris and especially castor(-eum) - have re-appeared (if, perhaps, they never fully disappeared) in perfumery, particularly as fixatives, prepared as alcoholic tinctures, added in

²⁰⁷ Vicq D'AZYR, *Instruction sur la manière de désinfecter une paroisse*, Paris (1775), 7-8.

²⁰⁸ Jocelyn BONNET, 'Les parfums de synthèse et la révolution du parfum', in *Histoire des Mœurs*, I, Paris (1990), 716-20; A. CORBIN, *Le miasme et la jonquille*. ., Avant-propos: 'La désodorisation et l'histoire de la perception'; 'Perfumes and Perfumery', entry in *Encyclopaedia Americana*.

²⁰⁹ Judit Cs. BENKO, *Esti Hídap*, Budapest, 14 December 1979.
Hullkóvári Érika, Sierán (2004), Portugal and the European spice trade, 1480-1580
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small quantities to the base fragrance after blending in order to render the odour more permanent. 'Spicy' has even emerged as a general term of classifying odours alongside 'sweet', 'heavy', 'fresh', 'woody' and 'floral'; the Armani *eau de homme* currently sells itself as 'a very Italian sensation of freshness, combined with a selection of subtle, sensual spices, and enhanced by precious woods'.²¹⁰

Part IV. MID-CENTURY CRISIS?: THE COLLAPSE OF THE CROWN FEITORIA.

11. AN ANALYSIS OF PORTUGUESE INSTITUTIONAL STRUCTURES AND TRADING POLICY.

11.1. Traditional historical accounts of the the Portuguese spice trade: fatalism, scape-goating and decline.

The history of the Portuguese spice trade over the sixteenth century cannot avoid being caught up in the bitter and polemical debate concerning imperial decadence, or the roots of decline (*decadência*). At first sight, this may appear strange given the outward longevity of the imperial phenomenon, the Portuguese being the last of the European overseas empires to fall in 1975. But historiography is quick to supplant the brief flurry of a golden age (*idade aurea*) in the Estado da Índia under Manuel with a spirit of decay from the reign of João III ('his tormented reign', in the opinion of João Lúcio de Azevedo).¹ The anonymous author of a report on the state of Portuguese India in 1568 explains his motives for writing as 'the pain it causes me to see the running down of the Indies, how it shrinks so patently before the eye' (*tenho tamanho pezar de ver a desaventura deste Estado como vai em diminuição tão vista ao olho*).² The debate was perhaps most famously inflamed by Diogo do Couto, who decried the venality and corruption of the overseas administration in the 1570s, drawing allusions to the downfall of ancient Rome, and predicting that it was only a matter of time before such sin was met with divine retribution. The tract scandalised the nation on its publication in 1790, but Couto's voice is only one in a widely circulating genre that dates back to the 1560s.³

¹ João Lucio de AZEVEDO, *Elementos para a historia económica de Portugal. Seculos XII-XVII*, Lisboa (1990), 144. *O seu reino tormentoso* thus ushered in, according to Azevedo, the third epoch (*a terceira época*) in Portuguese history.

² S.J. José WICKI, 'Duas relações sobre a situação da Índia portuguesa nos anos 1568 e 1569', in *Studia*, vol. VIII, Lisbon (1961), 133 ff, and also published as a *separata* of *Studia*, no. 8, Lisbon: Centro de Estudos Históricos Ultramarinos, (1961).

³ Diogo do COUTO, *Da Ásia, Décadas IV-XII* (Régia Oficina Tipográfica, 1777-78), *O Soldado Prático*, intro. & notes by Reis Brazil, (Lisbon, 1988). Also Francisco Rodrigues de SILVEIRA, *Reformação da Milícia e Governo do Estauo da India Oriental* and, from an outsider's perspective, Jean MOCQUET, *Voyages en Afrique, Asie, Indes Orientales et Occidentales*, Paris (1617). Padre Manuel GODINHO could comment disconsolately in 1663 that 'no presente está reduzido a tão poucas terras e cidades que se pode duvidar se foi aquelle Estado mais pequeno no principio do que se vê no fim', 'Viagem da Índia por terra para Portugal no ano de 1663' Heineke, in Manuel Bernardes BRANCO, *El-Rei D. Manuel, Lisboa (1888)*, 85-.

Historiography has unfortunately devoted itself to wrestling with the bitter, moralised invective of men such as Couto questioning for example, whether the *plano das Índias* did indeed amount to little more than a 'policy of piracy' (*política de pirataria*).⁴ This has eclipsed the economic dimension, on which we would like to think, as an economic historian, the whole issue of decadence rests and to which we shall turn in a minute. Other voices, such as Subrahmanyam's have warned that 'decline literature' may be nothing more than a sort of genre, which emerged contemporaneously in Ottoman and Mughal historiography, and which amounted to little more than a reaction to social realignments that were taking place, the passing of a particular order.⁵

What is certainly the case is that arguments for decline were simply passed down unquestioned through traditional Portuguese historiography until very recently. Even today, one can detect enduring features of the myth of decline. One of these is fatalism; even empirical historians like Godinho cannot refrain from curtailing the Portuguese empire with human mortality. By 1550, we are told, it was already swooning with fatigue (*sintomas de cansaço do organismo português*).⁶ Braudel, too, chooses to follow this metaphor; in his view the Portuguese Empire 'literally wore herself out trying to operate the Cape route'.⁷

Scapegoats are typically elected as the immediate cause of the nation's ills. The most forthcoming tends to be the union with Spain in 1580, which, it is claimed, on the spiritual level disrupted national cohesion, corrupted her *génio cosmopolita, mais plástico que o castelhano* and shattered the collective will (*quebrou a livre disciplina e coesão nacional*), and drew Portugal against her interests into the protracted dynastic struggle for Europe, rendering her shipping vulnerable to hostile attack.⁸ But even without Spain, Portugal is often represented as a victim of external circumstance, even a conspiracy - the Discoveries were 'imposed on our Motherland. . . by a host of foreigners' (*uma cunha de gente de fora*).⁹ In this

⁴ see, for example, Vieira de ALMEIDA, 'Decadência do Império português no Oriente', in A. BAIÃO ed., *História da Expansão Portuguesa no Mundo*, (1937-40), vol. II, 297.

⁵ S. SUBRAHMANYAM, *The Portuguese Empire*. ., (1993), 107, drawing on the work of Cornell FLEISCHER, *Bureaucrat and Intellectual in the Ottoman Empire. The historian Mustafa Ali (1541-1600)*, Princeton, (1986).

⁶ V.M. GODINHO, 'Flutuações económicas e devir estrutural do século XV ao século XVII', in *Ensaios*, t. II, Lisbon (1978), 262.

⁷ F. BRAUDEL, 'The Perspective of the World', vol. III of *Civilisation and Capitalism*, (1984), 27.

⁸ António SÉRGIO, *Bosquejo da História de Portugal*, 25 and Jaime CORTESÃO, II, 'A Geografia e a Economia da Restauração', in *Teoria Geral dos Descobrimientos Portugueses e outros ensaios*, Lisboa (1984); A. de EÇA, *Normas Económicas da Colonização Portuguesa até 1808*, 71.

tradition, the closure of the Crown *Feitoria* at Antwerp, the subject of this part of the thesis, is frequently explained with reference to the Antwerp troubles, despite a patent temporal misalignment between 1549 and the Spanish fury of 1566 or the fall of the city to Farnese's troops in 1585. In any case, as late as the 1630s/40s Antwerp still ranked as the most important port in the southern Netherlands.

The decline debate draws its first wind from the coincidence of political setbacks that frustrated Portugal around the middle of the sixteenth century. The chronicler de Sousa makes a list: the abandonment of the Crown *Feitoria* at Antwerp, the second encirclement of Diu, the collapse of the donatory system in Brasil and the surrender of the African strongholds at Alcácer Ceguer and Arzila. The question remains whether it is persuasive to talk of some common meta-historical process, as Portuguese historians such as Armando Castro insist, and fundamentally a nationally bounded one, that can make the link between the collapse of the Antwerp *Feitoria* and the abandonment of the *praças* of North Africa. To what degree is the history of the Crown spice agency in Flanders a function of the problems of the Estado da India, and how much is it grounded upon European commercial dynamics?

At first glance, it would appear that the fall of the Antwerp *Feitoria* in 1549 excessively pre-dates imperial decline. Steensgaard has pointed out that revenue taken in by Portuguese customs stations was still increasing in the period 1584-1607, though dropping off precipitously thereafter. This financial crisis can be seen as preparing the way for political collapse, which he goes on to assign as that of the loss, in 1622, of the Portuguese port of Hormuz to the East India Company and Persia.¹⁰ Other historians recently working on Portuguese India, such as Sanjay Subrahmanyam, would agree that the period 1610-1665 might be conveniently typologised 'empire in retreat'.¹¹ Other research might suggest that the process of decline be brought forward. Diffie and Winius have concluded that Asian trade was running on an aggregate deficit of around 25.000 cruzados a year from around 1550, even if we take as our sample the comparably quiet years of Viceroy Antão de Noronha's office (1564-68), unfettered by the high costs of military campaigning, while Azevedo refers us to one of João de Castro's complaints that as much as 50-60.000 cruzados had to be sent to

¹⁰ Niels STEENSGAARD, *The Asian Trade Revolution*, 88 & 94, (1974).

¹¹ S. SUBRAHMANYAM, *The Portuguese empire in Asia, 1500-1700: A political and economic history*, (Longmans, 1993).
 Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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India (*remeter para a Índia*) each year during the years of his governorship (1545-48).¹²

I don't find here any direct link between the collapse of the crown *feitoria*, turmoil in the spice trade and decline of the Estado da Índia. A more systematic analysis has been made by Vitorino de Magalhães Godinho, who ties the collapse of the crown *feitoria* to what he terms a structural break (*viragem estrutural*) in the configuration of the Portuguese Empire, which in turn is a product of turbulence in the global economy manifest in a series of cyclical *grandes crises*, that ran between 1495-1500, 1521-24, 1531-35, 1545-52. The crown *feitoria*, then, is a victim of the retraction (*um primeiro recuo*) of Portuguese state capitalism, although it is not clear what marks out the last crisis cycle (1545-1552) as holding the rudder of structural change - Godinho leaves the issue unsatisfactorily resolved, having simply strung together a list of Portuguese imperial setbacks, which he likens to a *paragem de respiração* affecting the system as a whole.¹³ The links between the setbacks afflicting the global economy and Portuguese state capitalism are similarly passed over, and the list of features of the new imperial system is unconvincing. There is no immediate connection, for example, between the beginnings of stagnation in the Portuguese Asian economy and the downfall of the social class he claims buttressed monarchic capitalism, the so-called middle bourgeoisie. It would be well to recall Braudel's work in differentiating the different paces of change in the economic from the social sphere.

Otherwise, given the reconfiguration of European commerce provoked by the discovery of new sources of precious metals in the New World (see Chapter 12), we might like to tie the notion of a Portuguese crisis to that of neighbouring Spain. But again the chronology protests: Chaunu elaborates sophisticated arguments that set the imperial abdication, the royal bankruptcies of the late 1550s and the peace of Cateau-Cambrésis (1559) into the global context of a drastic slump in transatlantic trade, but it is ten years late.¹⁴

It would nevertheless appear that at a more general level the mid-century experienced profound economic and commercial change at many of the key joints of the European economy. Ramon Carande has entitled the chapter dealing with the fortunes of Spain in the

¹² In 1564, the regent himself complained in a cedula that 'expenditures always run ahead of receipts', DIFFIE & WINIUS, *Foundations of the Portuguese Empire, 1415-1580*, Minneapolis: University of Minneapolis Press, (1977), 430; J.L. de AZEVEDO, *Elementos para a historia económica de Portugal. Seculos XII-XVII*, Lisboa (1990), 148.

¹³ GODINHO, 'Flutuações económicas e devir estrutural do século XV ao século XVII', in *Ensaio*, t. II, Lisbon (1968), 189.

years 1543-51 'The Years of Uncertainty' in his great monograph devoted to that entity.¹⁵ Antwerp passed through a difficult stage that saw it lose much of its financial legitimacy, and the Lyon fairs too were widely disrupted. The merchant-bankers of the southern German cities ceded the front stage of financial activity to the Genoese, and the prevalent *grandes companhias* were forced to concede ground to the smaller scale and more flexible systems of temporary partnership and the commission merchant.

Other research corroborates the idea that the 1540s were a time of active re-evaluation as far as the justification, form and direction of the Portuguese Empire are concerned. Subrahmanyam presents the 'mid-century debate' amongst the royal administration as to whether the pepper trade be freed of some constraints within Asia, and whether the *carreira* routes be rented out to the highest bidder.¹⁶ One group at court was lobbying the Crown that most of the Portuguese possessions in the western Indian Ocean were both unnecessary and illegitimate, unnecessary because they did not stimulate trade (read, open trade), and illegitimate because they had been acquired by Afonso de Albuquerque without prior sanction. In their opinion, state expenditure on maintaining costly outposts which were not of key strategic importance were considered a secondary priority next to the defence of Portuguese interests in North Africa.¹⁷ We might be tempted to read into this the history of the collapse of the Flanders 'outpost'.

Does all this talk at the end of the 1540s actively amount to re-orientation or decline? In a recent analysis, J.K.T. Thomas has suggested that 'stasis rather than decline is probably a more accurate way of defining Portugal's situation'.¹⁸ More circumspect authors, like Gentil da Silva, warn against unilinear readings of the fortunes of the Portuguese Empire: 'the Portuguese effort expands and retreats, develops, far from one being able to ascribe it a linear evolution, tightly linked to the rhythms of the economic circumstances' (*o esforço português alarga-se e retrai-se, desenvolve-se, longe de se lhe poder atribuir uma evolução linear, estreitamente ligado aos ritmos das complexas económicas*).¹⁹ Godinho himself in an earlier publication wisely warns us that 'the vicissitudes of the Cape route shouldn't be confused

¹⁵ R. CARANDE, *Carlos y sus banqueros*, Italian language edition, Genova (1987), pte. III, ch. XX.

¹⁶ S. SUBRAHMANYAM, *The Portuguese Empire in Asia*. ., 97-100.

¹⁷ Otilia Rodrigues FONTURA, *Portugal em Marrocos na época de D. João III - Abandono ou permanência?*, Licenciatura apresentada á Universidade de Lisboa, (1966).

¹⁸ J.K.T. THOMAS, *Decline in History. The European Experience*, Polity Press (1998), 196.

¹⁹ J. GENTIL DA SILVA, 'A Abertura de uma Rota para o Ocidente pelo Cabo da Boa Esperança não arruinou a rota do Índico', in *Estudo de História da Universidade de Lisboa*, 1966, pp. 1-10.

with those of [Portugal's] presence in the Orient, in constant adaptation to successive transformations' (*não deverem confundir-se as vicissitudes da rota do Cabo com as da presença no Oriente, em constante adaptação a sucessivas transformações*).²⁰ He seems to have changed his mind, for two years later the closure of the *feitoria* is seen to be significant of the nature of the Portuguese imperial experience in that it heralds the first blow in a linear sequence of degeneration, and at the same time was doomed by virtue of being intimately linked to an innately flawed centrally directing 'heart missing beats' (*coração em sobressalto*).

In my own analysis, I will perhaps steer a little clear of discussions of the phasings of global capitalism or the shelf-life of Portuguese state capitalism: the terms are too woolly, the approaches too speculative. Instead, I propose to start from the position that the events of 1549 be interpreted as a politically determined decision triggered by anomalies within the logic of operation of the crown *feitoria*. For if Damião de Góis could personally recommend the King to cease trading (*'mandar nenhwas espececearyas fora dese reyno per sua conta'*) in 1544 because the system was no longer favouring such enterprise, it has been evident to a number of investigators since Braamcamp Freire that for some time before that, from at least 1526, when French piracy in the Atlantic started to become an officially sponsored policy, that the institution was stagnating.²¹ In fact, as we have shown in section 4.2., the *feitoria* was put into question from the time that contracts started to structure the re-export trade around 1505.

But there were also short-term triggers conspiring for closure. While Portuguese Crown finances seem to have shown themselves in an ever more lamentable light (see section 11.3), the vicious circle of debt and debt servicing was brought to a halt by the surprise announcement in May 1547 from the consortium of High German bankers in Antwerp, including the representative of Anton Fugger, to cease all complicity, 'an arresting beat' (*una battuta d'arresto*) in Carande's analysis.²² Neither were the circumstances of the Portuguese pepper trade immediately surrounding the closure, whatever the speculations on the cyclical phasing of global capitalism, supportive: as we have seen in Chapter 10, prices on the European market, after a steep rise between 1543-7, collapsed dramatically, and Charles

²⁰ V.M. GODINHO, 'Oriente', in *Dicionario de Historia*, ed. Serrao (1966).

²¹ D. de GOÍIS, letter of July 2, 1544. Published as doc. IX-a in Guilherme J.C. HENRIQUES ed., *Ineditos Goesianos*, vol. I, Lisbon (1896), 93-94.

Wilson records a simultaneous drop in volumes arriving in Lisbon of around 35%.²³

Market circumstances are very much a reflection of wider concerns. So that in Chapter 12, I switch from institutional or operational features to survey some of the external pressures that might have come to bear on the closure of the crown *feitoria* in 1549. But perhaps it makes sense to begin at the decision itself in 1549.

11.2. The Feitoria: what collapsed?

The decommissioning of the Feitoria de Flandres in 1549 was a royal order (*carta régia*) of 15 February, 1549 that João III commended to Lourenço Lopes, ambassador at the court of Emperor Charles V, instructing his feitor João Rebelo and other officials of the Casa de Portugal to return to Lisbon. To all intensive purposes, the Feitoria had ceased its functioning by the end of 1548, or even before, as it seems that João de Rebello had spent little time at his post in Antwerp since 1545.²⁴ At the same time, it was declared that no further contracts were to be made. From 29 November of that year, spices were to be sold freely and exclusively for cash (*de contado*) from the Casa da Índia.

How can this retraction be reconciled to what occurred immediately thereafter, which was an apparent strengthening in the factory's legal and juridical position as demonstrable in the renewal of all former privileges and exemptions in 1554, confirmed by letter patent of King Philip in 1560, the resolution passed by the Estates General in Brussels on 17 October, 1577 that magistrates of Antwerp extend their 'sauvegarde et assurance' to the Portuguese nation, and the resultant, that their jurisdiction was written in to the *Rechten, ende Costumen van Antwerpen* of the city of Antwerp in 1582?²⁵ And then there is the startling fact that the number of members rose considerably around the mid-sixteenth century. For while a mere

²³ C. WILSON, *An Introduction to the Sources of European Economic History, 1500-1800*, (1977), Figure 3.4.

²⁴ SOUSA, Fr. Luiz de, *Annaes de El Rei Dom João Terceiro*, Sà da Costa, 279. GORIS, *Etudes sur les colonies marchandes méridionales à Anvers.*, 236 & WESEMBEEK, *La Casa de Portugal d'Anvers.*, 11. In what is most probably a confusion of the historical facts, Frederic Lane has contended that the King had been encouraged to take such a decision on the advice of Tomé Pires whilst ambassador at the court of the Emperor between 1509-11. Lane appears to have muddled Pires' role for the advice he gave that led to the setting up of an exclusive sales regime in Antwerp around 1505. F.C. LANE, 'The Mediterranean Spice Trade. Further Evidence of its revival. .', (1939-40), 585, citing Fr. Luiz de SOUSA, *Annaes de elrei Dom João Terceiro*, 1844 ed. Herculano, 420-423.

²⁵ with regard to 1554, see POHIL, 'Os Portugueses em Antuérpia (1550-1650)', in E. STOLS & J. EVERAERT, *Flandres e Portugal. Na confluência de duas culturas*, Antuérpia: I.N.A.P.A. (1991), 53; the letter patent of 1560 is in C.F.P.A., cx. 3, no. 21 - m. A, no. 3; with respect to 1577, see W.A. ENGELBRECHT, 'Esboço das relações históricas entre Portugal e a Holanda' (1949), 426; 'Van't Consulaet van de Natie van Portugal in Rechten, ende Costumen van Antwerpen, published by Christoph Plantin (1582), 24.

twenty members were written into the Feitoria's membership books in 1520, and estimates five years later stood at eight couples and four merchants, and subsequently constituted a maximum of not more than twenty members in 1548, a *registre communal* of 1552 mentions 100 Portuguese merchants, whereas a list of 1572 suggests the number of permanent Portuguese residents (*moradores*) was 94, which Serrão has interpreted as disguising a much more substantial colony of between four to five hundred people.²⁶

This paradox can only be satisfactorily answered with recourse to the institution's fundamental functional duality, by which I mean its service to the Crown as oppose to the collective interests of Portuguese merchants operative in the Low Countries. For the sake of comprehension, I have phrased this distinction in terms of the activities of a *feitoria* and a crown *feitoria*, though obviously no such definition was made at the time. Instead, sources deal implicitly with the division of powers between consuls and factor. As such, it is a distinction which is let to pass almost wholly ignored within the mainstream understanding of the Feitoria and its workings. But it appears to be crucial in describing the collapse of the Crown Feitoria in 1549, as is revealed by the transferral of the rights to the seat of the *nação* on 8 October, 1554. The building had originally been made available to the *nação* under the proviso that the *feitor* remain in residence there. On his departure in 1549, it seems that the building was reclaimed by the city authorities and sold to a certain Marco Nunes, though the 1554 text suggests, understandably so, that this had been borne by a lot of ill will on the part of the *nação* as a whole. Only in 1554 was the building re-awarded to the Portuguese trading community, but this time in the name of:

'*the consuls* [my italics] and the Portuguese nation. . who are to keep residence here in the house called the old factory, situated in Kipdorp'.

Bad blood was urged to be laid to rest:

their residence here, and all the questions and differences that went on among them. . will be fully brought to an end and sorted out amongst them, thus ensuring the privileges to those of the Portuguese nation here

²⁶ For general estimates regarding the size of the Portuguese community in Antwerp see Hans POHL 'Os Portugueses em Antuérpia', in EVERAERT & STOLS eds. *Flandres e Portugal* ., 61/2 and Joaquim Veríssimo SERRÃO, 'A feitoria de Antuérpia' in *História de Portugal (1495-1580)*, (1980), 330-331 and footnote #262. The purported *registre communal* is mentioned by WESEMBEEK, *La Casa de Portugal d'Anvers* ., 14, while the 1572 census is dealt with by GORIS, *Étude sur les colonies marchandes méridionales à Anvers*, (1925), 614-616. Malikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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granted.²⁷

But did the King retract his feitor permanently? For we have reason to think that there were others that followed: documents indicate in the capacity of *feitor* one António Marques in 1548, an Antonio Palos in 1556, in 1563 Francesco Palos, in 1567 Rodriguez Mendez, and for the last time Gaspar Maciel in 1572.²⁸ It comes, of course, as something of a surprise to discover the reinstatement of a new line of factors so soon after the purported 'collapse'. Were these the same factors of pre-1549, shorn only of their duties as regards marketing spices?

The best description we have we owe, once again, to Guicciardini:

.. in this manner their [Portuguese Crown] factors are now retained without haveing anything else to do instead as far as the business affairs of their masters is concerned, from which however they await from one hour to the next a thoroughgoing resolution. ²⁹

Clearly, the injunction against the factor's commercial activities concerned more than the Crown trade of spices. Thus it was that in 1562 the King had to send a special envoy, Luis Pinto, to procure arms and gunpowder, rather than have it sent down from his man in Antwerp.³⁰ In the light of these limitations, the factor's role was understandably open to

²⁷ 'los consules y a la naçion de portugal.. teniendo a qui sus residencias la casa llamada la vieja fatoria situada en el quipdorp'; 'su residencia y que todas las questiones y diferencias entre ellos mouidas.. seran del todo y enteramente liquidadas y determinadas entre ellos sigurendo los priuilegios a Los de la dhã naçion de portugal otorgados'. Fol. 82 of the Antwerp archival collection, dated 8 October, 1554; c.f. the original donation C.F.P.A., Livro F, fol. 333. That the house was sold to Marco Nunes, only to be recovered for the Portuguese community, is taken from WESEMBEEK, *La Casa de Portugal d'Anvers.* ., 11. His sources have not been recovered.

²⁸ A.M. is mentioned in a letter to D. João III dated 21 January, 1548, A.N.T.T. *Corpo Cronológico*, I, 80, doc. 16; A.P. appears as one of the signatories of the Ferufini project, see M.P. GÉNARD, 'Jean Baptiste Ferufini et les assurances maritimes à Anvers au XVIe siècle', in *Bulletin de la société de Géographie d'Anvers*, t. VIII; F.P. was factor in 1560, Archives Communales, *Requestboeck*, II (1550), fo. 224 of March 1, 1565 and is mentioned by GUICCIARDINI, whose *Descrittione di tutti i Paesi Bassi* came out in 1563; R.M. is drawn from GRAMULLA, *Handelsbeziehungen Kölner Kaufleute zwischen 1500 und 1650* (1972), 337 and might have been related to Rui Mendes, who was sending letters to the King from Antwerp (*Emves*) precisely in this period, Gavetas II, 6, 23. G. M. appears in the 1572 census of Portuguese resident in Antwerp, GORIS, *Etudes sur les colonies marchandes méridionales à Anvers.* ., 614-616. The municipal accounts of 1550 even speak of Jean de Rebello, as if he had never left under the King's orders in 1549. Archives Communales, *Stadsrekening* (1550), fo. 485. But this must have been an *ex post facto* settlement.

²⁹ 'ainsi leurs facteurs maintenant se tiennent sans rien faire en la place, en ce qui concerne le fait de négoçes de leurs maistres, desquels cependant ils attendent d'heure à autre la résolution entière'.

³⁰ Letter from Fr. Rodriguez to Armanteros, Antwerp, May 24, 1562, Grande Archivio di Napoli. Carte Farnesiane. Fascio 1631. Cited in GORIS, *Etudes sur les colonies marchandes méridionales à Anvers, 1458-1567*, 227. Żalikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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question. He lost his rights to reside in the Kipdorp building, as we have seen. The King, moreover, concentrated his efforts on representation in the Low Countries by trying to force the candidates of his preference in the consular elections.³¹ From 1549, we must conclude, the royal factor was little more than an honorary office. All important business was effected in the name of the *cônsules da nação portuguesa*.

Prior to the changes of 1549 and for a period thereafter, then, consuls and factors operated different schemes of authority within a common institution. Did their respective competences not conflict? Was there not an order of political primacy between royally appointed factors and the two consuls elected at the annual reunion of members on 6 January (on the *dia de Reis* at Epiphany)? It seems not, as their functions were significantly different and by virtue of the fact that the consuls were as answerable to the Belgian law and authorities, through appeal to the *skepyns* and the *Burgomaster*, as they were to the Portuguese monarch. One could cite instances to prompt the contrary, such as when the nation, in legitimising a levy of one *grosso* per pound value on Portuguese products arriving in Antwerp, to be paid into the Feitoria's kitty (*a bolsa da nação*), sought recourse to a royal decree (*alvará régio*) issued 8 May, 1512.³² Joaquim Veríssimo Serrão has profited from such sources in his definition of the consular role as 'encharged with the linking of the Crown with the merchant body' (*incumbidos da ligação entre a coroa e os mercadores*).³³ Furthermore, the men who staffed the consulates had not only often worked, or were to work as factors or in other capacities in the royal bureaucracy adjoining; on occasion, the same men served simultaneously as both consuls and Crown feitores. This was the case with Tomé Lopes, Ruy Fernandez and João Brandão in 1511, 1512 and 1527 respectively.³⁴

But I think this overlap overlooks the ready division of functions between these two discrete spheres of authority. The consuls' charge was to keep the seal of the nation, to adjudicate in any civil litigation inside the nation, and to redistribute the exemptions from import duties of beer and wine. He was similarly to preside over collective meetings, to

³¹ see Chapter 1, 'Organisation et import numérique des colonies méridionales', GORIS, *Etudes sur les colonies marchandes méridionales à Anvers, 1458-1567*. In 1564, for example, Jorge Pinto stood quite openly for the consulship as the King's candidate, 40. It is not clear how the episode ended. There is a provision from D. Sebastião naming Jorge Pinto *cônsul da nação portuguesa em Antuérpia* with incomplete date in the holdings of the Feitoria, C.F.P.A. cx. 4, mo. 3, no. 6.

³² BRAAMCAMP FREIRE, 'Maria Brandoa, a do Crisfal', *Arquivo Histórico Português*, (1903-16), t. VIII, pp. 73-74.

³³ SERRÃO, Joaquim Veríssimo, 'A Feitoria de Antuérpia', in *História de Portugal*, (1980), 330.

maintain the nation's warehouses, promote the sales of goods and recover indemnities in the event of piracy. In any case, I know of no conflict of authority with the factor of the Crown Feitoria or challenge in the face of a royal ruling.³⁵

I will therefore, in investigating the Feitoria's 'collapse' of 1549, have to distinguish between the Crown's commercial interests and those of the Portuguese commonwealth, which otherwise flourished, if not quite as the styling of privileges would have us believe, then at least until rocked by the political troubles surrounding the *Bildersturm* of 1566, after which the Portuguese started to move on to Cologne, as a protocol from the Cologne municipality and a report from the Antwerp Hansekantor testify.³⁶ A sizeable number of Portuguese also migrated to Cambrai and to Paris. On January 26, 1574 a letter from the Bruges magistracy was addressed to Gaspar Maciel, Portuguese factor, then in Hamburg, urging him to move back to that city with the rest of the nation.³⁷ But we must not exaggerate. The membership of the Feitoria de Flandres at Antwerp did not start to decrease until the second decade of the seventeenth century.³⁸

A storm in a teacup, perhaps, the closure of the Crown Feitoria. But one that allows us to take stock of the dynamics shaping the institutions of the Portuguese Empire and the Portuguese spice trade more specifically, fifty years after its inauguration. The closure of the Crown Feitoria, then, offers more than anything else a *point de repère*.

11.3. Internal malfunctionings: failings of the Feitoria at an operational level.

We have suggested all along that the essence of the Crown Feitoria was very much a hybrid one. Might there have been any conflicts of purpose given for example that the Feitoria served very much the political scheme of things? Vasconcelos was wont to describe the Feitoria de Flandres in terms of the first and the best school of Portuguese diplomacy in the sixteenth century, and we could easily demonstrate the frequent occasions the factors at Antwerp were called upon to undertake stints of ambassadorial service, João Brandao in an

³⁵ H. POHL, 'Os Portugueses em Antuérpia'. ., 58. The post of consul was a contractual obligation, on pain of losing exemption rights, and ran for one year.

³⁶ Brb. 98, 79v & K. I, II, Nr. 472, as cited by GRAMULLA, *Handelsbeziehungen Kölner Kaufleute zwischen 1500 und 1650*, 338-40.

³⁷ GILLIODTS VAN SEVEREN, *Cartulaire de l'ancienne Estaple de Bruges*, (1904), III, 229.

³⁸ H. POHL, 'Os Portugueses em Antuérpia', in E. STOLS & J. EVERAERT, *Flandres e Portugal. Na confluência de dois mundos*, (2001), pp. 114-115. In: *Journal of European Economic History*, 1991, 64, 1480-1580
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embassy to Charles V in 1517, Ruy Fernandez's mission to the King of France in 1534-5, or Tomé Lopes' sending to the court of Maximilian from 1509 to 1511.³⁹ But there seems little to suggest that politicking interfered with the sale of spices.

Another feature the feitoria very much retained was its function as the King's personal shopping mall, as countless pieces of correspondence demonstrate.⁴⁰ The last, a letter dated 13 September 1549, is His Majesty's order for 'three thousand [armoured] bodices with gauntlets, thigh-pieces, belt pouches, neck protection and helmets, as well as 3000 Bohemian arquebuses' (*três mil cossoletes [corseletes] com seus braçais, escarcelas, gorjais e celadas, e três mil arcabuzes de Boémia*).⁴¹

There are two things one might say about this kind of activity. First, this particular function of the factor could and was increasingly better served by the reciprocal flows of assets between Antwerp and Lisbon stemming from vigorous contract trade. Payments from contracting firms such as the Affaitati were substituted for purchase with delivery of specialised goods from the Antwerp market, as the list of current accounts in the firm's *Grands Livres* demonstrate. The traditional role of the *procurador*, moreover, as we shall see in section 11.2., was increasingly supplanted by that of the commission merchant.

Second, correspondence such as the above would suggest that little distinction was made, for the purposes of good accounting, between orders on the Crown's account and orders on the account of the State. The example of Portuguese public accounts I have included as Appendix 3 is more ambiguous: there is indeed an entry for receipts on the Crown's account, but this could equally constitute transfers, tributes, or duties collected from third parties. Is it not too early for distinctions between Crown and State to have been drawn?⁴²

Elsewhere, Godinho has made plausible calculations to demonstrate the positive trade

³⁹ Joaquim de VASCONCELLOS, 'A Feitoria de Portugal em Flandres', cap. III of *Damião de Goes, novos estudos*, 54.

⁴⁰ for instance, orders for hats and shirts, FREIRE, *Notícias da Feitoria de Flandres*. (1920), doc. XXIII; registers for the Royal Treasury, letter of 28 Sept. 1514, 104; a royal robe to commemorate Manuel's entrance into the Order of the Royal Fleece, 115; the sum necessary for the purchase of 20 falcons, 111. Otherwise Braamcamp FREIRE, 'Inventário do Guarda-Roupa de D. Manuel' in *Arquivo Histórico Portuguez*, II, (1904), p. 398, 392, 393, 397-403.

⁴¹ Frei Luís de SOUSA, *Annaes de El Rei Dom João Terceiro*, 281, lines 3-6.

⁴² cf. the definition of the *res publica* implicit in the lease of trading rights to Fernão Gomes in 1470, §7.4. Halikowski-Smith, Stefan (2001), 'Portugal and the European spice trade, 1480-1580' European University Institute DOI: 10.2870/92585

balance that the Feitoria must have enjoyed.⁴³ However, the lack of any public accounting procedure at the Antwerp Feitoria and authority to control its own expenditure, combined with the fact that metals payments under contracted trade increasingly bypassed the Feitoria and were made at Lisbon, gave rise to an increasingly apparent cash crisis in Antwerp. Factor João Brandão had written to the King together with his colleague Alonso Eanes de Palma as early as 1512 to expose the Feitoria's arrears and to complain of the King's failure to keep his accounts in Antwerp in the black.⁴⁴ Ten years later, factor Lourenço Lopes addressed much the same letter to the King, complaining that lack of funds obliged him in his business to resort to oaths.⁴⁵

One of the structural problems common to all strongly centralised systems is the lack of articulation with their parts. In a remarkably candid letter Damião de Goís sent to the King from Antwerp and dated July 2, 1544, the King was reprimanded for his lack of assiduity in maintaining financial correspondance with the Feitoria:

of the business affairs of this land and factory I have written many times to Your Royal Highness without reply, from which I conjecture that what I write is not worthy of reply.⁴⁶

The problem, of course, was only superficially represented at Antwerp; the truth is that the whole kingdom was heavily in debt and, caught in ever more protracted relationships of dependence, owed the already successful contracting firms 900.000 cruzados.⁴⁷ From 1528, a novel form of farming out public debt, the *padrões de juro*, appeared and rapidly lost their value on the European financial markets.

But in many ways, state debt appeared particularly obvious and particularly hopeless

⁴³ V.M. GODINHO, *L'économie de l'Empire Portugais aux XVe et XVIe Siècles*, (1969), 461, estimates that 12.000 quintals of pepper were delivered p.a. in Antwerp until 1520, and only 8.000 quintals thereafter, which should itself alone cover the 25.000 *marcs* of silver (= c.145.000 cruzados) and 15.000 quintals of copper (= 120.000 cruz.) flowing the other way. And this is to ignore the fact that Antwerp probably received, on average, twice this sum of spices as well as 40.000 arrobas, at least 50.000 cruzados worth of sugar.

⁴⁴ BRAAMCAMP FREIRE, *Notícias da Feitoria de Flandres*, 99.

⁴⁵ A.N.T.T., *Corpo Cronologico*, parte I, m. 28, no. 131.

⁴⁶ 'dos negoços desta terra e feytoria tenho per mtas [muitas] vezes espto [escrito] a vossa alteza sem aver resposta do q [que] per enjetturas cuido q ou o que espvo não e digno de resposta', *Inéditos Goesianos*, ed. G.J.C. Henriques (1896), vol. I, 94, doc. IX-A. The original is in *Corp. Cron.*, pte. I, maço 75, doc. 18.

⁴⁷ according to the Fugger balance sheet of 1539, the King of Portugal owed the firm 22.100 florins. R. EHRENBERG, *Capital and Finance in the Age of the Renaissance*, 1480-1580 (1966), 148. DOI: 10.2870/92585

at Antwerp. Already in 1515, letters of exchange were taken at Antwerp on the Casa da Índia.⁴⁸ On one occasion, the factor Francisco Pessoa borrowed 30 million gold francs on the Bourse for his King.⁴⁹ Debt was apparently greatest in Flanders and at the fairs of Castile, in 1544 running at 1,946,000 cruzados, 'and these are getting exchanged at such high rates that, as it seems from the letters of the feitor de Flandres, the debt will double in four years'.⁵⁰ Kellenbenz signals a letter written by the Portuguese King to Diego Larte, the mayor (*alcaide*) of the city of Porto, complaining of his 'crushing debts' in Flanders.⁵¹

The Crown Feitoria's lack of liquidity and the embarrassment this evidently caused the Portuguese monarch can be taken to account for the sighs of relief that greeted the closure of the Feitoria in 1549. In his explanation of its collapse, Serrão vents what must have been common feelings of the time, even if he ignores that the root of the problem stemmed from decisions taken in Lisbon rather than Antwerp: 'Nothing counselled for the maintenance in Central Europe of a 'warehouse' to the detriment of the Portuguese Treasury'.⁵² Is the Feitoria not vindicated somewhat by the Crown's subsequent declaration of bankruptcy in 1560?

As a corollary of the bureaucratic essence to the Portuguese economic system and the government promoted sale of offices, corruption and professional self-interest seem to have been endemic. Despite clear guidelines for professional conduct in the King's service and punishments for transgressions fully embodied in the *Ordenações da Índia*, published in 1520, captains of forts are, for example, widely recorded extorting incoming merchandise from native Indian shipping, and to have traded on their own account products reserved expressly

⁴⁸ V.M. GODINHO, *L'Économie de l'Empire Portugais..* (1969), 460, #4; apparently from *Arquivo Histórico Português*, vol. VI, nos. 8-11, p. 393.

⁴⁹ A. de B. de WESEMBEEK, *La Casa de Portugal d'Anvers. .*, 22.

⁵⁰ 'e éstes vão correndo a câmbios a tão altos preços que, segundo parece por cartas do feitor de Flandres, se dobra o dinheiro em quatro anos', *Anais de D. João III*, col. Clássicos Sá da Costa, vol. 2, 274-5. R. EHRENBERG, *Das Zeitalter..*, I, 134, nevertheless demonstrates that the debts owing the Fugger diminished from 12,469 Flemish pounds in 1533 to 2,400 pounds in 1536, from which they rose again somewhat to 6,252 pounds in 1546. Elsewhere, he calculates the interest paid by the Portuguese Crown as 18%, *Capital and Finance. .*, 268.

⁵¹ H. KELLENBENZ, 'Discussion des communications. .', in *Actes du V Colloque d'Histoire Maritime. .*, 371.

⁵² 'Nada aconselhava a manter na Europa Central um 'armazém' que dava prejuízo ao tesouro português', SERRÃO, *Os Feitores da Índia Portuguesa (1480-1580)*, 332. European University Institute

for the Crown.⁵³ Now, although Santos' work would seem to argue that factors, as direct representatives of the Crown in a commercial capacity were consequently more closely aligned to royal interests than the political governors and viceroys, there were certain suspicions that the Antwerp feitores were themselves 'disloyal intermediaries' (*intermediários infieis*); this at least is Azevedo's reading of a damning letter to João III by his ambassador Lourenço Pires de Távora on the subject of the Feitoria, in which he is said to have recommended that 'neither a shadow, nor a man who has served there should remain of it' (*dela não devia ficar nem sombra, nem homem nenhum dos que lá tinham servido*).⁵⁴

Is there evidence of malpractice? Only, perhaps, the story of Francisco Pessoa, factor between 1517 and 1520, who played on the dualism between his personal rights to trade *nomine proprii* and for the Feitoria, *nomine instituterio*. Brought to account for non-payment of certain letters of exchange, Pessoa claimed that as his signature appeared next to that of Ruy Fernandez, secretary of the Feitoria, public funds were to cover the debt. Pessoa was on the verge of leaving for Portugal when an arrest warrant was issued, backed by the Regent herself.⁵⁵

In conclusion, poor and careless administration seem more propitious lines of enquiry than the bitter moral debate over the ethic of service in the Portuguese Empire, a debate fomented by aggrieved servants of the state like Diogo do Couto from the mid-sixteenth century and seized upon by Portuguese historians searching for the reasons for decline.

11.4. Redundant and repressive in a changing world: was the Feitoria de Flandres an archaic idea?

Beyond the procedural inefficiencies and 'internal' contradictions that I have tried to draw attention to in the previous section, one must start to ask questions about the underlying assumptions and reasoning behind the crown *feitoria* starting from the mere notion of a spice staple in foreign lands. Formally they were above all markets, markets of some importance that could force merchants to subject themselves to their rules, but also markets that were able

⁵³ Boletim de Filmoteca Ultramarina Portuguesa, 'Carta régia para o vice-rei, 28 January 1588', II, 286 & 'Traslado dum Alvará', 178 etc.

⁵⁴ AZEVEDO, *Epocas de Portugal económico: esboços de história* (1928), 132. This letter is either in full or mentioned in SOUSA, *Annaes de El Rei Dom João Terceiro*, either the M. Rodrigues Lapa edition, Lisbon (1938), or in the re-edited collection entitled *Clássicos Sá da Costa*, Lisbon (1951), 421. For the idea that factors were trustworthy executors of the King's instructions, see Maria Emília Madeira SANTOS, *Afonso de Albuquerque e os Feitores*, 203 ff.

to impose a certain domination, *de jure* or *de facto*, over outlying regions.⁵⁶ Staples were traditionally declared, as the word suggests, for those indispensable goods necessary for the functioning of daily life: Antwerp, for instance, was granted the right in 1415 by Emperor Sigismund to hold three staples; in fish, salt and oats. To this, by royal charter of 1491, were added the exclusive staple rights on the alum extracted from the papal mines at Tolfa with respect to the market of the Low Countries.⁵⁷ By calling a staple, the authorities had some degree of physical control over the flows of these goods, not only for tax purposes but so as to ease bottlenecks caused by hoarding and speculation in times of scarcity. The spirit of the exercise, nevertheless, adhered to the time-worn royal prerogative of establishing markets and fairs. This in its turn was symptomatic of the orthodox monarchical approach to affairs of trade, being physical control, primarily so as to facilitate collection of royal dues, but equally a mechanism for easy recourse on the part of the Crown to borrowing from a favoured semi-state institution.⁵⁸ But if the benefits of selecting a staple were the ability to price fix and limit the flow of goods on to the market, in a market marked by multiple sources of supply a better marketing option would have been to open, rather than restrict, export channels. Furthermore, staples held their own in a world where commercial privileges were hard to come by and trade otherwise paralytic. But early modern trade was opening up new possibilities all the time; rivalrous monarchies like the Valois and Tudors actively promoted alternative emporia - Rouen and London, respectively - to attract the spice trade away from Antwerp. What we might be dealing with, then, is an institution that was formulated to an out-dated concept of re-export and was patently blind to the realities of the European market for spices.

England, for instance, was moving swiftly on to a more expansive market-seeking policy as the reasons attributed to the foundation of the Russia Company testify:

in the time of King Edward the Sixthe the King and his councell, finding it inconvenient that the utterance of the comodities of England, especiallie cloth, should soe much depend upon the Low Countries and Spaine and that it should be beneficiall to have a vent some other waies, did encourage his subjectes the

⁵⁶ Jan CRAEYBECKX, 'Quelques grands marchés de vin français dans les anciens Pays-Bas et dans le Nord de la France à la fin du Moyen-Age et au XVI^e siècle; contribution à l'étude de la notion d'étaple', *Studi in onore di Armando Saponi*, II, Milan (1957), 819.

⁵⁷ F.H. MERTENS & K.L. TORFS, *Geschiedenis van Antwerpen sedert de stichting der stad tot onze tijden*, Antwerpen: Buschmann (1845-54), III, 327.

⁵⁸ 'Physical control' of trade by the Crown as an aspect of medieval trade regulation figures in STUBBS, *Constitutional History*, II, xvi., 411 and in passing by Edward MILLER, 'Government Economic Policies and Public Finance, 1000-1300', chapter 8 of the *European Economic History of Europe*, vol. I, ed. C. Cipolla. Halilowski Smith-Stefan (2004), Portugal and the European spice trade, 1480-1580
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merchauntes to adventure for discoverie of new trades northe warde⁵⁹.

Much of the authorship can be attributed to William Cecil, Secretary of State between 1550-1572, who repeatedly opposed the maintenance of a staple of any kind, especially one abroad whereby the "lord thereof is of so great a power as to annoy this realme with stays and statutes". This had been an argument used elsewhere. Nicolò Contarini had reminded the Venetian city elders that it was imperative that the city's private citizens should avoid becoming dependent upon foreign princes.⁶⁰ Over the dispute which had pushed the Adventurers in 1564 to abandon Antwerp for the Emden marts, Cecil had reminded them of his preference that the Company carry their goods to many markets rather than depend upon the tenuous thread which linked the destinies of England and the Low Countries via the marts of Brabant.⁶¹

There were other potent forces on the rise that sapped away at the idea of a cloth staple and chartered companies altogether, primarily the beginnings of a vigorous English merchant navy. The chronicler of the life of King Henry VI, Hall, had recognised that: 'The caryage out of wolle to the stapul ys a grete hurte to the people of England'.⁶² Similarly, the prospect of a Spanish Company was denounced in a petition of 1574 as 'inhibiting some of the Queen's subjects without cause from their lawful liberty, which never yet was seen or known'.⁶³ By contrast, the Portuguese Cortes, normally the most vociferous lobby for private merchant interests, had nothing to say on the subject of the crown *feitoria* at Antwerp. So, if we are to concede that as a staple the crown *feitoria* was an antiquated institution, it would be unfair to suggest it was in any way repressive of an up and coming Portuguese merchant class.

The crown *feitoria* appears out-dated, superfluous even, on other counts, particularly as set against the sixteenth century backdrop of the freeing up and diversification of European trade, where family and company business organisations triumphed as the most efficient unit

⁵⁹ State Papers Foreign, Russia, i, f. 133.7

⁶⁰ cited in TAFURI, *Venice and the Renaissance*, Cambridge, Mass.: MIT Press, (1989), 193.

⁶¹ William Cecil, 'Reason to move a forbearng of the restitution of the entrecourse to Antwerpe', State Papers Domestic, Elizabeth I, S.P. 12/35/33.

⁶² HALL, *Henry VI*, 131 as cited by STARKEY, *England in the reign of Henry VIII, a dialogue between Cardinal Pole and Thomas Lupset*, (1538) repr. by the Early English Text Society (1878), II, i. 173.

⁶³ State Papers Domestic, (1574), XCVII, and the Cotton Collection, MSS. 14865, B I, fol. 220.

of commercial representation.⁶⁴ The day of the medieval *procurador*, an official of the King sent out on his instruction to acquire goods at the great marts of Europe, was on the wane. The private sector was there to do it for him in the guise of local commission agents; that is, the market henceforth came to the King, or was at least sent for.⁶⁵ French monarchs of the period such as François I and Henri II were already well ahead of their Portuguese counterparts in their using such 'modern-day' commission merchants of various specialisations active at specific markets; rich damask cloth was bought directly from Antwerp merchant Denys van Meertkerke, while other companies took pains to send factors to the Paris court for the King's greater convenience, such as Guillaume van Armoyen.⁶⁶ Commission merchants such as the van der Molens actively sold goods on the Antwerp market and at the fairs of Bergen - Genoese velvet, Venetian silk satin, spices too - on behalf of third parties from as far afield as Italy.⁶⁷

So, the feitor was ever less useful in his capacity as *procurador* and, as we have seen, pre-established contracts on spices signed in Lisbon diminished the purpose of his presence in Antwerp from a sales perspective. And even in political terms we might suggest that the *feitor* as a political representative of the King was left behind by the rapid sixteenth century development of permanent diplomatic posting. As Gareth Mattingly has shown, the age called for vocational ambassadors in permanent presence at the royal court, rather than temporary missions with specific instructions. A lot of prestige was stored in the maintenance of and visible presence of state embassies. Portugal had engaged such a presence at the Spanish court - to whose throne the Portuguese monarchs habitually harboured dynastic intentions - and at the Papal Curia during the first half of the sixteenth century, and rapidly diffused their diplomatic service in northern European countries during the second. By the time the instruction for the closure of the Crown Feitoria was announced in 1549, the Portuguese had established just such a permanent presence at the court of Charles V in Bruxelles, after many years of regular visits from Antwerp. Politically, in other words, the Antwerp feitor was made superfluous and largely marking time before recall.

⁶⁴ Michel MOLLAT, *Europe and the Sea*, Oxford: Blackwell, (1993).

⁶⁵ Philip D. CURTIN, *Cross-cultural Trade in World History*, Cambridge University Press (1984), 4; Kristof GLAMANN, 'European Trade, 1500-1750' in Carlo CIPOLLA, *Economic History of Europe*, Fontana, vol. 2, 514.

⁶⁶ Emile COORNAERT, *Anvers et le commerce parisien au XVIe siècle*, Bruxelles (1950). For penetrating remarks on commission business, by which one merchant took a fixed percentage on goods either bought or sold on behalf of another merchant, see BRULEZ, *Della Faille*, 366 ff.

⁶⁷ F. EDLER, 'The Van der Molen Commission Merchants of Antwerp: Trade with Italy, 1538-44', in Haliukowski, Smith, Stefan (2001), *Portugal and the European spice trade, 1480-1580*, Chicago (1937), 78-145.
 Medieval and Historical Essays in Honour of James W. G. Thompson, European University Institute
 DOI: 10.2870/92585

These critiques on the Crown Feitoria and its staple function are ultimately part of a wider critique on the relative inefficiency of controlled trading systems generally. An old argument, it is contended that beyond an initial, protective role of infant enterprise, state intervention is counterproductive. A lot of this argument turns on policy, which, as we have seen, was inescapably compromised by inconsistency, inefficiency and expediency. Expediency was the most pernicious; the heavily indebted states manipulated trade for short-term fiscal relief. At a still more intimate level, we can appreciate the shortcomings in the conceptualisation of the Feitoria de Flandres as a state organ of trade when we compare its behaviour with that of the Merchants Adventurers. In this case, power was delegated to an abiding group of chartered merchants who elected their own representation in Antwerp, rather than an royal factor on an established state salary. The institution's physiognomy immediately resembles that of 'a well-organised trading company' in its own right.⁶⁸ Dependent for their livelihoods upon commercial success and with the degree of independence necessary for the articulation of their grievances, the English merchants pushed vigorously for the redress of disfunctions and a high level of accountability. There followed a remarkable volume of economic legislation that included a statute for the detailed regulation of the cloth industry as a whole, another aimed at fortifying the exchange regulations, often abused by an indebted government keen to pursue a policy of strong sterling so as to keep debts low, and a third sought to put down abuses in the marketing of woolens culminating in the subsequent prosecution of a number of wool brokers in Star Chamber.⁶⁹

We are to conclude, then, that the play between public and private structuring is vital in assessing the respective histories of these two institutions. This would seem to confirm the conclusions of the great weight of historical research on the issue, namely that 'government policy was at best a burden to the bulk of private enterprise and at worst destructive of it.. the economically most advanced nations seem to have made least use of this technique of economic development'.⁷⁰ This argument is widely used to distinguish the nature of the commercial arrangements successive European empires established with their overseas

⁶⁸ G.O. RAMSAY, *English Overseas Trade during the Centuries of Emergence, studies in some modern origins of the English-speaking world*, London (1957), 11. For the sake of further comparison, see S. VAN BRAKEL, 'Die Entwicklung und Organisation der Merchant-Adventurers', in *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*, V, (1906), 401-32.

⁶⁹ G.O. RAMSAY, *English Overseas Trade during the Centuries of Emergence*, 23: Star Chamber, Philip & Mary, 3/63; marketing abuses, 5 & 6, Edward VI, cc. 7 & 19.

⁷⁰ B.E. SUPPLE, 'The Nature of Enterprise' in *Cambridge Economic History of Europe*, vol. 5, ed. C.H. Wilson, <https://doi.org/10.1017/C9780521000511.001>, Portugal and the European spice trade, 1480-1580
European University Institute

colonies, with the Portuguese system singled out and its salient features typecast as Crown trading monopoly and centralised direction. Comparisons are drawn in terms of Portugal's successors in Asia, where the standard reflection is that of a natural progression from an 'immature and inefficient' Iberian *extraktivorientierte* system of 'suffocating and repressive' direction to those 'superior' institutional forms of Dutch and British merchant capitalism with their emphasis on the free development of an entrepreneurial spirit and individual initiative.⁷¹ Ultimately, the argument takes on the form of cultural type or ethos of empire building, with the Portuguese noble, a man of iron faith prepared to carry his religious message overseas with the sword, set against the North European Protestant with his mindset of labour and thrift and more interested in his purse and accounting ledger. These social stereotypes are prone to lead us away from a critical evaluation of institutional or systemic characteristics. Here Portuguese historians have responded with hostility, seeking to expose the hypocrisy of foreign critics by suggesting that the formula for trade with the Indies, the monopoly, remained unchanged.⁷² But this counter-critique largely misses the point, being that responsibility for trade was devolved to specific business institutions formed from the pooling of private capital. And as I have sought to show earlier, the rationality of the private firm, as reflected both in the tasks it set itself and its *de facto* business practice, was considerably more efficient in trade than public government.

To be fair, perhaps, more telling institutional comparisons might be made with contemporaneous European rival trading states. But again we are led to disdain Portugal and Spain, this time for the city-states of Venice and Genoa.⁷³ Even within the umbrella of the Portuguese case we can see that the one imperial product which fell outside the scope of the royal trading monopoly, sugar, indefensible from foreign shipping within easy striking distance of Madeira or the Canaries, weathered the competition to become the motor of the Portuguese imperial economy over the seventeenth century. Evidence, on both counts, to support the classical economic axiom that 'the acts of governments are non-economic and

⁷¹ Max WEBER, *Wirtschaftsgeschichte. Abriss der universalen Sozial- und Wirtschaftsgeschichte*, 4 ed., Berlin (1981), which associates monopoly with the *ancien régime* and a primary victim of the 'triumph of Parliament' in seventeenth century England. See also Joseph SCHUMPETER, *Theorie der wirtschaftlichen Entwicklung*, especially part II, chapters 7-8, 1911 repr. Berlin (1964). Brought out in specific historical context by Niels STEENSGAARD, *The Asian Trade Revolution of the Seventeenth Century* (1974), 120, 126, 141, 151-3 *passim*. and Peter KRIEDTE, 'Vom Großhändler zum Detaillisten. Der Handel mit 'Kolonialwaren im 17. und 18. Jahrhundert', in *Jahrbuch für Wirtschaftsgeschichte*, 1, (1994), 11.

⁷² Almeida d'EÇA, *Normas Económicas da Colonização Portuguesa até 1808*, (1921), 56-57.

⁷³ Peter BURKE, 'Republics of merchants in Early Modern Europe', in J. BAECHLER (ed.), *Europe and the Rise of Capitalism 1480-1680* (1988), 111-112. See also Peter BURKE, 'The European spice trade, 1480-1580' *Journal of Economic Surveys*, 1997, 11, 1-32.

unsystematic' and should then be excluded entirely from models of long-run accumulation.⁷⁴

By way of conclusion, one might suggest that the Crown Feitoria was not a victim of the lack of a structuring trade policy, but of their plurality. The Merchants Adventurers' activities, by contrast, were not undermined by rival sales and distribution networks in the manner that further subcontracting impinged upon the Crown Feitoria. The Crown Feitoria turned out to be the weakest trading option available to the Crown. Its closure in 1549, in fact, was merely a tardy recognition of what had long been a *fait accompli*. The Portuguese Crown created a commercial arm out of traditional economic thinking but rapidly abandoned it for the greater convenience and benefits of dealing through official subcontractors who could be persuaded on occasion to operate as commission merchants. Such a system was already the norm in the Spanish court.⁷⁵ In time, the use of commissioned agents too could be replaced by the workings of the permanent market, a European market in essence, which through its hidden cogs saw both to the plentiful provisioning of those things the Portuguese King had previously had to commission from foreign places like Antwerp and on the other side of the coin, prompt sales of whatever goods were passed its way.

⁷⁴ see Joan ROBINSON, *The Accumulation of Capital*, 3 ed. London: Macmillan (1969), 69 where assumption #8 proceeds: 'Strict laissez-faire prevails. Governments play no part in economic affairs'.

⁷⁵ On 14 March 1523, for example, Charles V wrote to the cities of Danzig and Stettin to beseech their assistance in supplying on the ruler's account Jakob Fugger and Cristóbal de Haro with copper, masts, tar, pitch, roping etc., enough to load eight ships to be sent on to La Coruña where the Casa del Contratación was in the throes of being established. Götz Freiherr von PÖLNITZ, *Fugger und Hanse: ein hundertjähriges Ringen um Nord- und Ostsee*, Schwäbische Forschungsgemeinschaft, Reihe 4, Bd. 2, Tübingen (1953), 43. Taken from *Hanseforschung* III, 399-439 (2001), Portugal and the European spice trade, 1480-1580

12. EXTERNAL PRESSURES: THE CROWN FEITORIA IN A CHANGING WORLD.

12.1. The discovery of silver in South America and the re-orientation of Portuguese trading flows to sources of Spanish metal supply.

One of the most seizing changes that occurred on the European economic panorama over the course of the sixteenth century was the discovery of huge quantities of silver in Mexico and Bolivia. By the 1590s, more than twelve times the quantities mined in central Europe were being shipped into Spain. Historians since Hamilton have devoted themselves to assessing the impact of all this bullion on European prices; since Frank Spooner the idea of a world price revolution has entered the historical profession's vernacular.¹

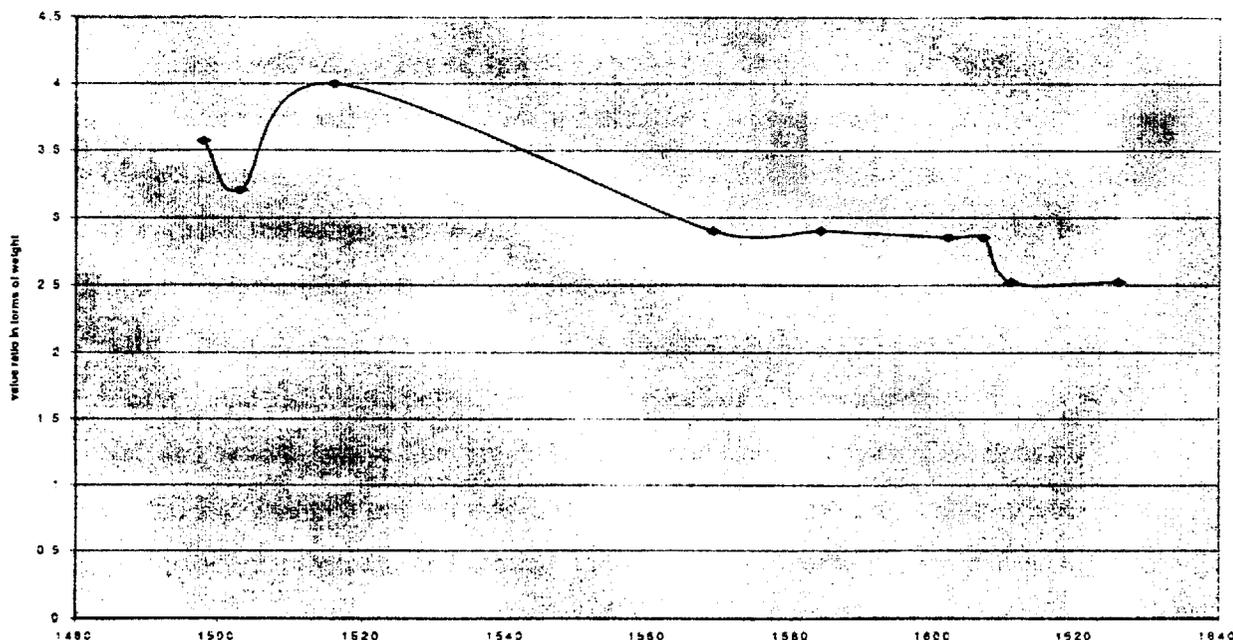
For Portugal, which remained, in the purer sense of the word, dependent on precious metals for the purchase of those goods from whose profits Empire was economically sustained, this discovery was momentous in other ways. If previously enchained to those central European mines dominated by familiar cartels of High German merchant bankers, these new floods of silver money fundamentally re-oriented the direction of her exchange, drawing her ever more concretely into an Atlantic system under the aegis of Spain. The simultaneous diminution of German silver production over the period following 1535 and the depreciating terms of trade on the purchasing power of copper (see Graph 9) rendered this phenomenon doubly significant.² Henceforth, van der Wee assures us, the Portuguese bought silver in Seville more cheaply than the German metal on the Antwerp market.³ Other sources would corroborate this phenomenon. The southern customs posts of the Brabant land toll suggest that the German trade was already stationary in the thirties and beginning to show signs of decline in the forties, in contrast with other toll posts registering different export markets.⁴ This new orientation, furthermore, in classic Braudellian manner, was concretised both politically as well as commercially. Aubin has described how the pattern of sixteenth century royal marriages 'closed Portugal into a Spanish orbit' (*vont enfermer Portugal dans*

¹ Earl J. HAMILTON, *American Treasure and the Price Revolution in Spain*, Cambridge, Mass. (1934).

² John U. NEF, 'Silver production in Central Europe', *Journal of Political Economy*, Chicago, vol. XLIX, (Feb.-Dec., 1941), 584-86; IBID., 'The Boom in Mining and Metallurgy, 1460-1530', *Cambridge Economic History of Europe*, vol. 2, part VII, chapter X.

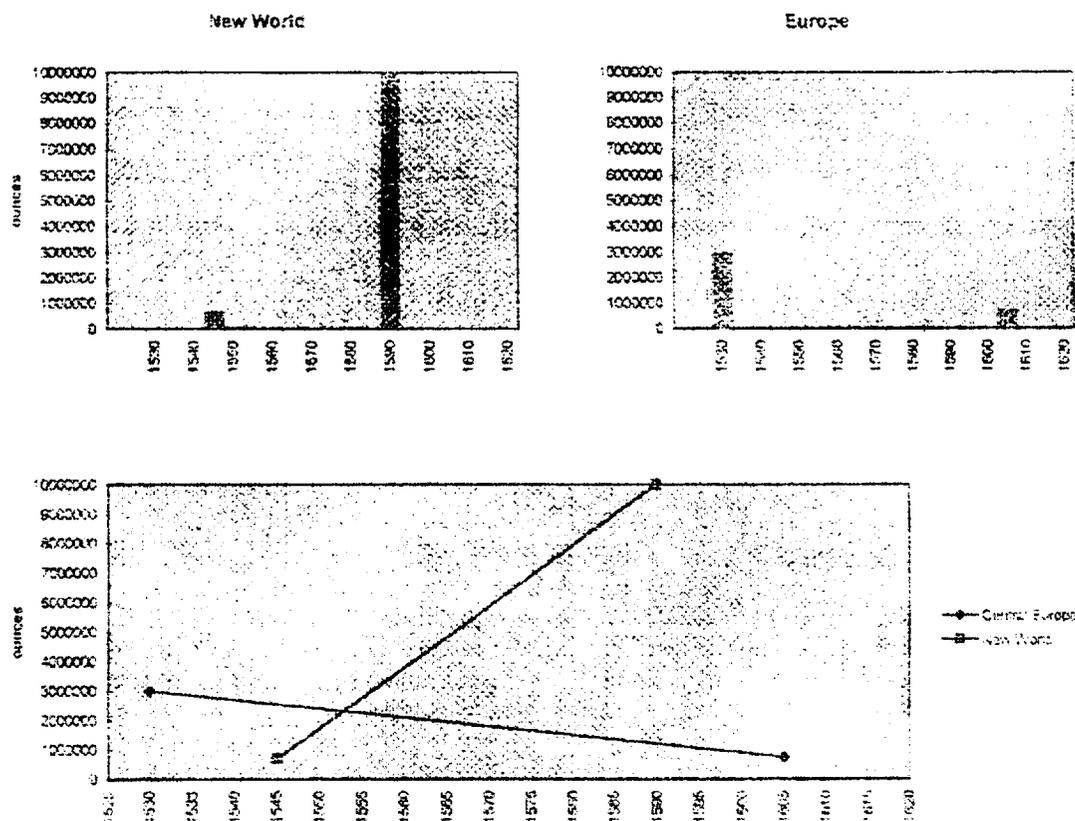
³ VAN DER WEE, *The Growth of the Antwerp Market*. ., 159.

Graph 9. The terms of trade between copper and pepper in Malabar, 1480-1630.



Source: V.M. GODINHO, *Os Descobrimentos e a economica mundial*. (1982-7), vol. II, 46 ff.

Graph 10. Provenance of silver circulating in Europe, 1530-1615.



Source: John NEF, *Journal of Political Economy*, vol. XLIX (1941)



l'orbite espagnole).⁵ Can we not detect, ultimately, the seeds of Iberian union in this momentous turn of events?

Now, if the re-export policy of spices hitherto had been strongly conditioned by the need to secure reciprocal deliveries of these metals, there was no longer such a compulsion. Supplies of metals and sales of spices were no longer intertwined. Here, then, was the opportunity to break the active link at Antwerp and open the gates of the Casa das Indias in Lisbon. But the explanatory power of this argument depends in large degree upon dates: how closely did the closure of the Crown Feitoria in Antwerp coincide with the arrival of the new silver from South America? And here there are divergencies. The evidence, as it is presented by John Nef and turned into a line graph (Graph 10), would suggest that Spanish silver overtook central European output around 1555 but given that exporting began around 1545, could easily corroborate the idea that around 1548-9 the Portuguese Crown chose to switch definitively to Spanish supplies.⁶ Hamilton, on the other hand, indicates that abundant quantities of silver were arriving in Spain already in the 1530s, while Elliott insists it was only in the 1560s that large-scale working became possible with the introduction of a new method for extracting silver from the ore by use of an amalgam of mercury, the so-called *Saigerung* technique.⁷ Already the chronological coincidence appears less precise.

And it would be worthwhile clarifying quite when it was that copper, which so impressed itself upon the first European commentators as the most propitious source of exchange on the Indies trading circuit, gave way to silver, though the list of receipts of the factor of the King of Cochin for purchases of pepper and spices between October 1510 and February 1518 would already suggest silver had become the pre-eminent medium of exchange.⁸

⁵ Jean AUBIN, 'Le Portugal dans l'Europe des années 1500', in *L'Humanisme portugais et l'Europe. Actes du XXI Colloque International d'études humanistes, Tours 1978*, Paris (1984), 220.

⁶ John U. NEF, 'Silver Production in Central Europe', (1941).

⁷ HAMILTON, *American treasure and the price revolution in Spain*, 42. J.H. ELLIOTT, 'The European Economy', in *Europe Divided, 1559-1598*, Fontana (1968), 53. EHRENBERG, *Capital and Finance in the Age of the Renaissance*, 95 corroborates Hamilton in referring to 1536 as a year in which 'the supply of gold and silver 'from India' was this year so plentiful that the mints did not know how to deal with it'.

⁸ Carta de quitação no. 657, *Arquivo histórico português*, repr. GODINHO, *L'économie de l'Empire Portugais aux XVe et XVIe Siècles*, (1969), III, 313-5 and in Appendix 4. The drift of these statistics would seem to be confirmed from a more systematic analysis by Jan KIENIEWICZ, *Druga do Indii i handel korzenny. .*, Tabela 8 'Import metali z Antwerpii do Portugalii i reeksport do Indii', 583. H. KELLENBENZ mentions that the overproduction of copper became 'discernible' between 1510-1515 and 'critical' during the 1520s, particularly as West African markets became saturated with metal manufactures, 'Precious Metals in the Age of Expansion', in *Spain, 1500-1600: A History of the Iberian Peninsula*, Stuttgart (1981), 82.

12.2. Political disturbance and European wars.

Up until now, we have investigated the decision to close the Crown Feitoria upon underlying systemic and economic shortcomings. It might be an idea, as attempted in this section, to situate the closure more within the strictures of *histoire événementielle*, upon the caprices of political turn-arounds, triggers rather than structures. The point of departure, it seems to me, is a brief survey of the political scene, and flashpoints during the period of the Crown Feitoria's existence, the principal of which was the Franco-Habsburg conflict, which engulfed the sixteenth century, and was particularly fiercely contested in northern Europe between 1521-1529, though also in the '30s, provoking a serious crisis in the Southern Netherlands, of which Antwerp's trade was the first, and perhaps the most badly, affected.⁹ Complaints of 'the worst conditions for travel across imperial lands' (*as pessimas condições de circulação nas terras do Império*) reverberate in the Portuguese factors' correspondance as they were understood specifically to cause stockpiling and which resulted in depressed prices in spices on the market at Antwerp. In February 1520, Almada could assert that if 'Germany was reasonably safe so that one could transport, miracles would immediately result' (*a Alemanha estevese hum pouco segura que se podese carrear logo farya millagres*).¹⁰ Thus it was that news of a peace was greeted by Damião de Goís with the greatest relief, adding that 'spices too will feel it, as they will from now on enjoy much better sale since they can now travel everywhere, which is surely a good thing' (*as especyarias tambem o sentirão porque daquy perarante terão muito melhor despacho per que poderão ir pera todas partes que he grande bem seguramente*).¹¹

As part of the wider conflict were the troubles over the Duchy of Guelders, which rumbled on for about fifty years following its outbreak in 1491. Unresolved by the Treaty of Cambrai in 1508, the war spread to the County of Zutphen. The war affected key trading routes; in April 1511 merchants on their way to Frankfurt were seized by Guelder cavalymen and held to ransom.¹² Damião de Goís, in his capacity as secretary of the Feitoria de Flandres, wrote to the King on December 13, 1528 highlighting the 'serious hurts' (*graves*

⁹ VAN DER WEE, *The Low Countries in the Early Modern World* (1993), 98.

¹⁰ letter of 4 February, 1520, Antwerp, published as Letter 1 in BARATA. 'Epistolografia de Rui Fernandes.', (1973).

¹¹ letter of December 13, 1528 cited in A. H. OLIVEIRA MARQUES, 'Damião de Goís e os mercadores de Danzig', separata do *Arquivo de Bibliografia Portuguesa*, ano IV, no. 15-16, Coimbra (1959).

prejuízos) affecting the redistribution of Portuguese goods as a result of this dispute: 'principally since the merchandise cannot pass through Germany, France and other places as a result of these their lands constituting border-areas' (*pryncipalmente porque as mercadorias nom podião pasar par Allemanha, França e outras partes por ter suas terras nas fronteiras*). With Charles V's offensive against the French and Danish kings and the duke of Cleves, Jülich and Gelderland, which broke out in July 1542, the main road between Antwerp and Cologne was interrupted once again for the best part of a year. Roover maintains that no spice shipments got through until October 1544.¹³ In any case, stocks throughout this period accumulated at Antwerp and prices remained noticeably stagnant. So it was that the Regent hurried to reassure German merchants, on the occasion of Charles V's subsequent invasion of Guelders in June 1546, that both they and their wares would be safe.¹⁴

One might also consider the German *Bauernkriege* (1524-26), which undoubtedly disrupted transcontinental traffic with Central Europe, as did the robber-knights, the infamous *Placker*, who flourished in the near anarchy of the period preceding the Peace of Augsburg, 1555. Less significant, perhaps, was the Schmalkaldic War (1546-7), which took for its epicentre Bohemia, Lusatia and Saxony; Gairdner nevertheless asserts that trade with Italy was affected.¹⁵

Finally, there was the unrest between Denmark and the Hansa that broke out in 1510 and continued on-and-off, spreading to include Holland which Christian III prepared to invade in 1542, right through until the religious wars of the late 1540s. The Sound was repeatedly opened and closed, which interrupted the grain export from the Baltic region and the import of Hungarian copper via Stettin and Gdansk, though it is only with the first sets of custom records in 1562 that the impact of these interruptions can be gauged with any accuracy.

A lot of the disturbance to trade, however, wasn't war at all but simply local dispute or rural lawlessness. The scale of this unrest should not be underestimated. On one occasion, a convoy of 89 merchants of Antwerp and Mechlin were seized near Cologne, two or three killed and a massive ransom of 100.000 florins demanded.¹⁶ In 1559, commercial traffic

¹³ ROOVER, 'The market for spices in Antwerp, 1538-44', #3, 214.

¹⁴ BREWER & GAIRDNER, *Letters and Papers.. of the reign of Henry VIII*, vol. XXI, pt. I, no. 1135.

¹⁵ IBID., XXI, pt. I, no. 1113.

¹⁶ J. H. MEGGERS, *Spice and the European spice trade, 1480-1580* (Leiden, 1974), p. 174.

from Nuremberg was plundered at Balen on the Kampen.¹⁷ The Portuguese factor, Rui Fernandez, reported to the King from Augsburg that ‘nobody can pass safely and each day carts and merchandise are seized in such a way that nobody can get past if not by a miracle’ (*nom pode nymgem pasar seguro e cada dja se tomam caros e mercados de maneira que nygem pasa se nom por mylagre*), and could count himself fortunate to return safely to Antwerp from his visit to southern Germany, if forced to pass by way of France. Only in Bavaria, by his estimation, were the roads safe.¹⁸

The direct consequences of this unsatisfactory state of affairs were twofold. German merchants in Antwerp complained that they were unable to buy as much as they wished at Antwerp because they dared not risk moving their assets.¹⁹ The Portuguese themselves felt the pinch when a consignment of silver metal the Antwerp factor sent on to Lisbon on 14 February, 1515 was reported to have fallen short of the sum requested due to brigands’ seizures between Antwerp and Cologne.²⁰ By the same stroke, the markets of Germany, Poland and Hungary were reported in February 1521 to be standing quite empty of spices. Distributional paralysis naturally worked both ways.

12.3. The losses of Portuguese freight to shipwreck and sea-borne piracy.

Eulogies to the trade at Antwerp are well known through Guicciardini and other commentators. But this only disguises the fact that forwarding commercial shipments by sea from Portugal was if anything more hazardous and prone to interruption than European overland trade. For one, navigating the rough and exposed waters of the Atlantic was of a different technical order to the relative security of criss-crossing an inland sea like the Mediterranean. Shipwreck on the shipping route up to Antwerp took a steady toll on Portuguese shipping, as vividly described from personal experience by Matteo da Bergamo, or in the letters sent out by the Portuguese King seeking restitution of goods recovered in

¹⁷ W. BRULEZ, ‘Lettres commerciales de Daniel et Antoine van Bomberg Grimani (1532-1543)’, in *Bulletin de l’Institut Historique Belge de Rome*, XXXI, (195x).

¹⁸ letter of 10 January, 1520, BRAAMCAMP, *Noticias da Feitoria de Flandres*, doc. XLII., p. 110 & doc. XXXIX.

¹⁹ Lourenço Lopes explained to the King how: ‘Muitas grandes mercadores alemães e outros, que em vossos reinos tratam, me disseram ja por muitas vezes, em praticas que tinhamos acerca de mercadorias e especcarias, que elles não compravam a metade do que comprariam, se tivessem maneira de la passar o dinheiro, e que a qui o dariam de boa vontade’. Letter dated Antwerp, 8 November, 1517.

such incidents.²¹ The precise losses are conveniently summed up in a report attached to Sousa's chronicle and entitled 'Relação de naus que se perderam no caminho da India' [An account of ships lost on the route to India], computed for the period running up until 1551 and which include the 'naus que se perderam indo pera Frandes com carga de especiaria' (ships lost on the Flanders run with cargos of spice). The final count is five ships and 300.000 cruzados loss on the *trato de Europa*, out of a total estimated loss of 31 ships and 3.352.150 cruzados.²²

Table 7. Losses of the King's spice ships due to shipwrecks, 1521-51.

	Number of ships lost	Total value of cargo lost	Average cargo per ship
Cape route. Outbound.	13	552.150	50.000
Cape route. Inbound.	10	2.450.000	250.000
India-Hormuz	3	50.000	16.666
Lisbon-Antwerp	5	300.000	60.000
TOTAL LOSSES	31	3.352.150	

As much as a sixth of the Crown fleet running the spice trade and lost to the rocks fell victim on the redistributive leg between Lisbon and Antwerp; ignored by the genre of literature that emerged as 'A História Tragica Maritima', which was devoted to heroic tragedies at sea and sought exotic settings for its tales, the Antwerp leg was in proportion to the fleets' overall mileage as perilous an undertaking as a journey to the coast of Malabar.²³

Piracy presented itself as the other menace to Portuguese shipping, a perpetual

²¹ see Prospero PERAGALLO, 'Viaggio di Matteo da Bergamo in India sulla flotta di Vasco da Gama, 1502-3', in *Bolletino della Società geografica italiana*, XXXIV (1902); for an example of the second type of literature, see 'Carta do Rei D. João III ao Cardinal Wolsey', dated Coimbra, September 10, 1527, B.L. Cotton, Nero, B. I, fol. 64.

²² taken from Frei Luís de SOUSA, *Anais de D. João III*, ed. M. Rodrigues Lapa, Lisbon (1938), II, 237 & 243; suplemento, t. II, pp. 291-2.

²³ Giblin, *La Navigazione* (1904) e *Viaggi e naufragi sulla Europa del Nord*, Roma-Bari, Bulzoni (1991).

historical feature of navigation through the politically charged waters of the English Channel.²⁴ But in a little known report written at the end of the 1540s, which coincides more or less precisely with the period of the Portuguese Crown retraction, an anonymous merchant candidly expresses his protest that the hazards of trade with Antwerp had mounted steadily over the preceding ten years to the point of commercial impracticability:

From around 1538-40, the merchant is noticeably exposed to pillage as the prey of almost all nations of the world; from 1540 to 1544 at the hands of the French, then between 1544-46 by the English, then from 1547 to 1548 by the Scottish and now, over the last year, starting up again with this French war of relief. It's a marvel that the sea-borne traffic hasn't been entirely ruined.²⁵

For a number of maritime insurers of Antwerp, there were fears indeed of ruin. In a letter of April 1546, the English ambassador to the Low Countries, Vaughan, reported a series of petitions by fifty or so insurers to the City Magistrates and even the Privy Council, in which it was stated that they had lost 35.000 Flemish crowns between February and mid-April of that year, mostly on ships coming up from Italy and Iberia. Dealers lay in wait at English ports to buy up the plunder as it was brought in, making any thoughts of recovery of property impossible.²⁶ In 1547, the Regent of the Low Countries, Mary of Hungary, convened her deputies in an emergency session to discuss the problem and responded by restricting the release of port exit licences. In 1551, Antwerp merchants delivered a petition to the Habsburg government claiming that pirates, principally Scots, had taken ships and goods worth an estimated 1.699.000 Holland pounds over the previous eight to ten years.²⁷

Sectors of international commerce that managed to weather this particular storm and the acute war years of 1551-53 that followed, seem to have arrived subsequently at a period of relative prosperity, though the war with France rumbled on until 1559 and the peace of Cateau-Cambrésis. Vincenzo Collodi of Lucca, based at Antwerp, could hope for the best in his capacity as insurer as early as April 1550 - 'now that peace reigns between the French and

²⁴ F. CANTINEAU, 'Origines des relations commerciales entre la Flandre et le Portugal', *Boletim da Sociedade de Geographia de Lisboa*, series XVIII, Lisbon (1900), no. 1, 24 ff.

²⁵ 'Signamment depuis l'an 1538 et 1540, le marchand est exposé au pillage, ayant esté la proye de quasy toutes les nations du monde, comme en l'an 1540 jusques en l'an 1544 des Franchois, depuis de l'an 1544 jusques 1546 des Englois, depuis l'an 1547 et 1548 des Escossoys, et maintenant pour le dernier an commencement de cette guerre de rechief des Francois. Il est à s'émerveiller que le trafic par mer ne fut pas entièrement ruiné'. Archives communales d'Anvers, Dossier Marine, Equipement de navires, no. 5011.

²⁶ BREWER & GAIRDNER, *Letters and Papers, Foreign and Domestic, of the reign of Henry VIII*, vol. XXI, pt. I, nos. 578, 615.

English', he wrote, '[one] should be able to sail normally' (*hora che seguida la pace tra francesi e inglesi. . [e si] doverà ragionevolmente navigare*).²⁸ The period between 1553-1565 has even been described as the apogee of alum exports to northern markets, the dangers of sea travel rearing their head only subsequently, between 1566-1602, with the Dutch Revolt and the fierce waterborne deprivations of the Seabeggars (*watergeuzen*). Antwerp customs records confirm that overall trade, measured as goods exported from Antwerp, rose steadily between 1543-44 and at the time of the treasurer Grammaye's report ten years later.²⁹

The question nevertheless remains: was Portuguese Crown trade at Antwerp a victim of heightened uncertainty in North Sea and French Atlantic waters at the close of the first half of the sixteenth century? João III instructed his envoy to tell the ambassador at the French court, Ataíde, that between 1500 and 1531 'more than 300 ships of mine [but more probably 'mine' as in 'my subjects'] have been taken (*aos meus tem tomados passante de tresentos navios*).³⁰ In a letter written three years later to the same ambassador, Dom João III expressed a figure as high as 350 Portuguese ships that he claimed had either been seized or plundered, including six or seven of his own fleet. Losses were estimated at one million cruzados.³¹ Godinho, in an independent reassessment of subsequent available statistics on the issue, concludes that all in all a little more than 450 ships were lost by the Portuguese in the first half of the sixteenth century. The rate of incidence that he presents, moreover, (see Graph 11) concurs with the anonymous merchant's report with which we began this chapter, in that the years 1541-49 see a substantial rise in the amount of shipping lost, with the highest losses experienced immediately thereafter, between 1550-1551. What this amounts to, in

²⁸ Renzo SABBATINI, 'Cercar esca'. *Mercanti lucchesi ad Anversa nel Cinquecento* (1985), citing the Archivio di Stato in Lucca, AG 127, n. 34.

²⁹ Jean DELUMEAU, *L'alun de Rome XVe-XIXe siècle*, Paris (1962), 217. Confirm the validity of the Antwerp customs statement taken from ESSEN, *Contribution à l'Histoire du Port d'Anvers et du Commerce d'Exportation des Pays-Bas vers l'Espagne et le Portugal à l'époque de Charles Quint (1553-4)*, (1921), 30. Gerard Grammaye's *Memoriebook* (1580-82) was published by DENUCE in 1928.

³⁰ published in Fernando PALHA, *A carta de marca de João Anjo, exposição summaria dos factos extrahida de documentos originaes e inéditos*, Lisbon (1882), doc. I and as Letter #6, *Letters of John III, King of Portugal, 1521-7*, Camb. Mass. (1931).

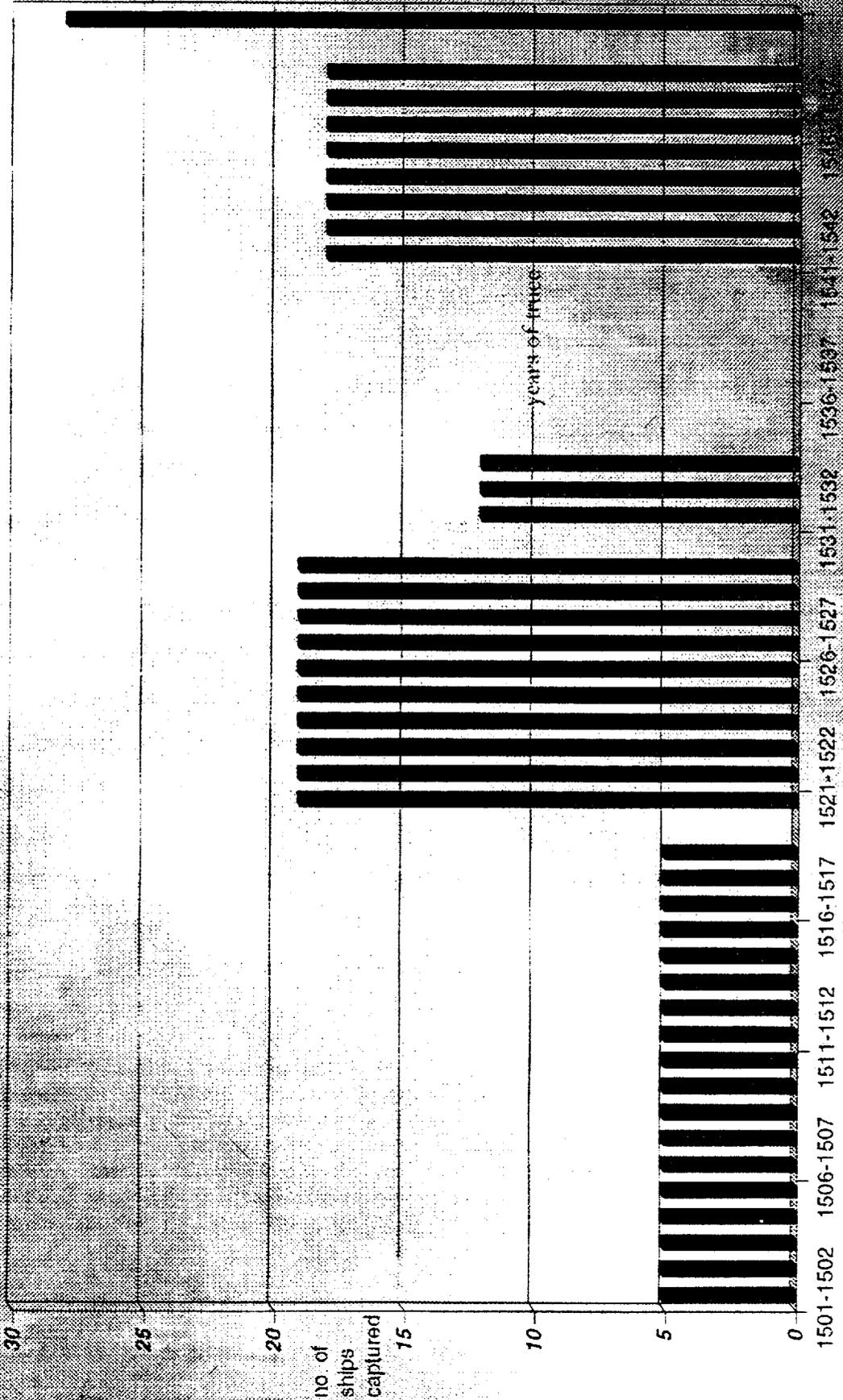
³¹ Frei Luís de SOUSA, *Anais de D. João III: suplemento*, ed. R. Lapa, t. II, 237. The letter prompted the despatch of Rui Fernandes de Almada to the French court on January 1 1534 to communicate the gravity of the situation.

We should not, perhaps, take the Portuguese Crown's estimates too seriously: it needed the French ambassador, Jean Nicot, to point out in 1560 that a register should be kept of Portuguese victims of French deprivations including the full names of captain and crew as well as quantity, nature of merchandise and destination. Edmund FALGAIROLLE, *Jean Nicot* (1897), xxxv. In any case, the French King assessed the losses at 400,000 cruzados for the 20th year of the reign of João III, 1530-1531. 43, doc. 25.



Graph 11. The Incidence of French piracy on Portuguese shipping.

source: V.M. Godinho, *Mito e Mercadoria, Utopias Práticas de Navegar, Lisbon (1990).*





Godinho's estimation, is the loss of as much as half the Portuguese national marine - 'a terrible blow' (*terrível golpe*) indeed, if these statistics are to be believed.³²

I would contend that deprivations, if a major issue and for some historians satisfactory enough an explanation for the revocation of the Crown feitor, cannot in itself account for the collapse of crown trading at a structural level.³³ The problem of piracy could be outflanked, as it was in 1568 when the Spanish silver fleets switched from using the Biscayan *zabras* on the run between Loredo to Antwerp to Mediterranean redistributive networks, from Barcelona to Genova and thence overland routes running north.³⁴

Nevertheless, it remains to be asked why the Portuguese Crown did not respond to piracy more concertedly. Godinho has described the Portuguese response to Breton privateering in the mid-fifteenth century on the sea-routes north to Flanders as 'effective reprisals, reinforcing lively negotiations with the Duke of Brittany' (*represálias eficazes, reforçando enérgicas negociações junto do duque de Bretanha*). Portuguese armadas were sent out expressly to chase up outlaws like the Biscayan Joham de Laranda in 1488.³⁵ But as the sixteenth century wore on, the Portuguese naval presence on her chief shipping lines increasingly appeared a mere shadow of its former self. Unlike her European competitors, Portugal failed to affront the increasing insecurity at sea by instituting, for example, an adequate convoy system on her European trading routes. Jaime Cortesão has drawn attention to the *capitanias da mar*, a political charge assigned between at least 1516-30 and whose task it was to lead small Portuguese armed squadrons up and down the Brazilian littoral, especially around the Rio do Prata. The system was extended to patrols along the Malagueta coast as far as Mina, and home-bound fleets from the Indies from the time of Lopo Soares' return in 1519 were escorted from the Azores.

But although ships were usually safe in Portuguese metropolitan waters, they remained

³² V.M. GODINHO, 'As incidências da pirateria no sistema português', ch. 3 of *Mito e Mercadoria, Utopia e Prática de Navegar - séculos XIII-XVIII*, Lisboa (1990). Ana Maria Pereira FERREIRA, who consecrated her PhD thesis to the problem of piracy as the principal determinant in political relations between France and Portugal in the first half of the sixteenth century, however, dismisses Godinho's work as 'um panorama longínquo da realidade. . baseado apenas em fontes publicadas', *Problemas Marítimos entre Portugal e a França na primeira metade do século XVI*, dissertação de doutoramento em História ap. a Fac. de Ciências Sociais e Humanas da Universidade Nova de Lisboa (1991), nota #1, 7.

³³ c.f. J.A. GORIS, *Etudes sur les colonies marchandes méridionales à Anvers, 1458-1567*, (1925), 236.

³⁴ Fernand BRAUDEL, *La Méditerranée.*, Paris (1949), 376-381.

³⁵ BRAAMCAMP FREIRE, 'Expedições e armadas de 1488', doc. no. 2, as cited by GODINHO, *Mito e Mercadoria, Utopia e Prática de Navegar, séculos XIII-XVIII* (1990), 462.
Markowski, Omidi, Stefan (2001), Portugal and the European Spice Trade, 1480-1580
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painfully exposed on the trip up to Antwerp. Convoys of Portuguese ships, when recorded, either formed around the state fleets on their sporadic visits to Antwerp or else on an *ad hoc* basis. Antwerp's New Christian spice contractors arranged southbound fleets to travel together to Lisbon and Andalusia; it was most probably one of these fleets of mixed Spanish and Portuguese amounting to 50 sail that arrived by return in Antwerp in 1525.³⁶

Portugal's competitors, it needs be pointed out, saw far more readily to the protection of their domestic merchant navies. The Venetian galleys always went heavily armed and with a requisite number of bowmen aboard, while the Genoese insisted that merchandise of any value be transported on board the armed galleys of the Commune. The Dutch authorities initially commissioned accompanying warships paid for by special levies (*omslagen*), but commuted this to stringent regulations demanding that west-bound merchantmen carry double the usual armament or else sail in convoys of at least forty ships.

At any rate, the Portuguese Crown took few active measures to confront the lawlessness on the high seas, preferring to seek alternative commercial outlets on the Mediterranean, as we have speculated with the presence of a Portuguese feitor in Marseille in 1524, or else operate through a series of ineffectual diplomatic missions and the repeated tendering of naive requests, which were only rebuffed insolently by a French monarchy openly encouraging 'reprisals' via free distribution of the ignominious letters of mark (*cartas de marca*).³⁷ International treaties such as the Treaty de Crépy of 1544, by which the French agreed not to interfere with the Portuguese and Spanish New Worlds, as the Fointainebleau agreement of June 1531, by which both sides committed themselves to the abolition of all issued *cartas de marca* and the immediate cession of reprisals, were nonchalantly reneged upon from the French side. Generous Portuguese disbursements in gold bullion to the political protagonists (an indemnity of 60.000 francs to Ango and 10.000 cruzados to Admiral Chabot, on top of loans to the King and annual pensions to Counsellor Montmorency and Chancellor Du Prat), which were intended to pay for the compromise, as was the case with the much more expensive Treaty of Saragossa, ultimately led nowhere. The hopes reawakened with the

³⁶ G. BERTRIJS, *Chronijck der Stadt Antwerpen toegeschraeven aan den Notaris Geeraard Bertijn*, published by G. van Havre, Antwerp (1879).

³⁷ see, for example, François I's famous *carta de marca* issued to Jean Ango authorising him to take what he liked from Portuguese *fazendas*, A.N.T.T., Gaveta III, m. I, no. 19 and m. II, no. 7; François's letter of 27 July, 1530, to the governors of Provence and other royal provinces instructing them not to impede Jean Ango from seizing goods from the Portuguese in compensation for Portuguese deprivations valued at 250.000 ducats as cited in BARATA, *Rui Fernandes de Almada*, (1971); also Frei Luís de SOUSA, *Anais de D. João III*, ed. M. Rodrigues Lapa, Lisbon (1938), II, 237, and Fernando PALHA, *A carta de marca de João Ango, exposição summaria dos factos extrahida de documentos originaes e inéditos*, Lisboa (1882). For a treatment of the issue in secondary literature, see Charles de la RONCIÈRE, *Histoire de la marine française*, 5 vols., Paris (1909), especially I, 111-134, and II, 140-141. For a more recent study, see P. J. H. BOUTER, *Portugal and the liberty of the seas, 1480-1580*

establishment of a judicial body to broker a resolution, the Tribunal de Presas, composed of *deputados* of both countries, and which first met in Bayonne on 22 March, 1535, were dashed by French foot-dragging and accusatory polemic in which Portugal was castigated for its purported hostility to the Valois cause in the House's struggle against the Habsburgs.³⁸ In 1558, the Venetian ambassador Capello declared that the King of France laughed openly at the protests of his Portuguese brother-in-law.

Thus, in effect a hopeless foreign policy of sustaining benevolent neutrality to all sides backfired; rather than laud Portuguese neutrality as 'a tour de force of cleverness' (*uma obra-prima de habilidade*), neutrality had none of the political pay-offs it might do in a more gentlemanly scheme of international relations. Rather, it made Portugal become open prey to not just French, but also English privateers working in the Channel, who responded to the ambiguous international situation and Elizabeth I's annoyance with the Portuguese for not conceding an inch on the principle of *mare clausum* with respect to non-European waters.³⁹ This, which started out as a mere point of irritation, turned into a forthright demand on the occasion of any request on the part of the Ambassador of Portugal that his King reciprocally 'vouchsafe to admit in his next navigation to Callicut some English men of the Kings appointment to aduventure therewith for the provision of the realme for spice'.⁴⁰ Unsatisfied, the English Crown, like the French, turned to issuing letters of mark, such as we find issued to a certain Mr. Winters, and even went so far as to sign a treaty of war with the French Crown and which specifically targeted 'the ships of Portugal bearing spices and other goods via the said Strait and Low Countries and lands of the Emperor' (*les navires de Portugal chargées d'epiceries et autres marchandises par led. Destroit et basses régions et païs de l'Empereur*).⁴¹

Ultimately, the Portuguese were forced to toughen up and take sides. Naval forces for the protection of metropolitan Portugal were increased substantially; twenty armed *latinos* of 25 to 30 tons, grouped in six flotillas each with its own port of supply, were made available

³⁸ see, for example, A.N.T.T., Corp. Cron., pte. III, maço 13, doc. 12 and *ibid.*, pt. I, m. 61, 56. In 1537, Charles V pressed the King of Portugal to forbid French vessels from entering her ports.

³⁹ P. S. MARTÍNEZ, *História Diplomática de Portugal*, (1986), 104, taking his cue from SANTARÉM, *Quadro elementar das relações políticas e diplomáticas de Portugal com as diversas potencias do mundo desde o princípio da Monarchia portugueza até aos nossos dias*, III, pp. LXIV-LXV.

⁴⁰ British Library, Cotton, Nero, B I, doc. 74 ('out of the Counsell table booke'), Slyford, 14 October, 1541.

⁴¹ British Library, Cottoniana, codice Nero, B. I. 'Reasons for a Portugall to move the trade into England', January 29, 1569, point #15, fol. 147v; see Ana Maria Pereira FERREIRA, *Problemas Marítimos entre Portugal e a França na primeira metade do século XVI*, from Bibliothèque Nationale de Paris, Nouv. Acq., no. 9388, fl.

46-49 ^vHalikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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and four galleons were instructed to patrol the Atlantic coastline, while one *navio grosso* and three caravels were to keep watch over the Algarve. The traditional Portuguese neutrality was compromised by an agreement made with the Emperor to coordinate actions against the French. Provisions directed at 'all the ports and Portuguese points of anchorage' (*todos os portos e ancoradouros portugueses*) decreed that no boat or caravel could sail 'for the West' (*para a Poente*) without a royal license. This echoed imperial policy which from the early 1540s required that even the Portuguese Crown factor in Antwerp obtain a licence from the Regent in order to export.⁴² But these measures, for what they were worth, were made too late in the day to have any influence on the fate of the Feitoria; they were announced only at the beginning of 1552.⁴³

12.4. The decline of Portuguese freight along the Lisbon - Flanders axis.

The hazards and losses to shipwreck and piracy can only have sucked the lifeblood of active shipping between Lisbon and Antwerp. But this is merely one aspect, and one that cannot hold great explicative power, of the changing configuration of freight on this particular route. In what follows we shall try to demonstrate the decline of Portuguese shipping operating on the route up to Antwerp, which in turn can only have undermined the rationale for maintaining an external staple in that city. Of course, we are concerned primarily with the Portuguese re-export trade of spices rather than her merchant shipping fleet generally, but then it might be useful to remind oneself, as was pointed out in the section on *ciclos de negócio*, that Portuguese freight was overwhelmingly re-export of spices.

The question, to pose it more succinctly, is not so much whether Portuguese shipping on European waters declined, for we know that as a fact - it led directly to that sorry state of affairs described by Mercator two hundred years later, in which he reported 'The Portuguese themselves carry no commerce of consequence with any other European dominions: the British, France, Dutch, Germans, Danes, Swedes, Spaniards and most of the

⁴² documents in *A.H.P.*, t. II (1904), pp. 243 ff and Pedro de AZEVEDO, *Defesa da navegação de Portugal contra os franceses*, t. VI (1908), p. 161 ff. and particularly 164-65. For imperial licenses from Antwerp, see R. HAEPKE, *Niederländische Akten und Urkunden zur Geschichte der Hanse und zur Deutschen Seegeschichte*, Munich (1913), 372. The contractors, equally, needed permission in the form of a *sauf-conduit*, *sauvegarde et seurté* from the Emperor and the Chancellery of the Brabant Court in order to import into Antwerp, GORIS, *Étude sur les colonies méridionales...*, 202.

⁴³ GODINHO, 'As Incidências da Pirateria no Sistema Português do Século XVI', in *Mito, Mercadoria, Utopia e Brasil*, (1990), 473.
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states of Italy having factories and consuls settled in Lisbon'.⁴⁴ Rather, we need to ask how much the decline was catalysed in the period under question, as Serrão would encourage us to believe.⁴⁵

Now, ever since Afonso I's (1106-85) *política do Mar*, the Portuguese had developed their presence on long distance shipping lines both to northern Europe and equally, into the Mediterranean.⁴⁶ From 1293, Portuguese ships are registered charged for La Rochelle, Brittany and Normandy.⁴⁷ At Bruges, the Portuguese shipping community played an important role, organising itself into one of the first 'nations' around a collective *bolsa de comercio*.⁴⁸ Florentine merchants active in Lisbon at the beginning of the fifteenth century, such as Jacopo di ser Vanni, gave their orders for fine textiles from Flanders to local Portuguese shipmen.⁴⁹ Portuguese progress into the Mediterranean seems to have taken place a little later, during the second half of the fifteenth century, and been tightly competed by the Basques, who traditionally furnished the great metropolises of Genoa and Barcelona with cereals and grain.⁵⁰ Indeed, this appears to have been the initial line of trade that ushered the Portuguese into the Mediterranean. Venetian official records of 1502 blame the Portuguese, if alongside Biscayans and the Spanish altogether, for the decline of the city's merchant shipping, arguing that whereas before 'they were not used to passing the Straits of Gibraltar (*non solevano passar el stretto de Zibelterra*), now they had seized the salt and wheat trade of the 'mar de Lion'.⁵¹ Heers has investigated the issue in greater detail, concluding that the niche the Portuguese cut out for themselves hinged upon deliveries at

⁴⁴ cited by FISHER, 'Lisbon as a Port Town in the Eighteenth Century' in *Lisbon as a Port Town, the British Seamen and other Maritime Themes*, Exeter Maritime Studies no. 2, University of Exeter (1988), §65, 25.

⁴⁵ SERRÃO, *História de Portugal*, (1980), 332.

⁴⁶ for Portuguese shipping links with the Mediterranean, see V. RAU, *Portugal e o Mediterrâneo no século XV. Alguns aspectos diplomáticos e económicos das relações com a Itália*, Lisbon: Centro de Estudos da Marinha, Instituto Hidrográfico, (1973), particularly p. 14.

⁴⁷ *Descobrimientos Portugueses...*, ed. Silva Marques, vol. I, p. 21-22.

⁴⁸ 'Carta régia aprovando a instituição da bolsa de comercio, Lisboa', 10 de Maio, 1293. A.N.T.T. Gaveta III, maço 5, no. 5.

⁴⁹ Virgínia RAU, 'Bartolomeu di Iacopo di Ser Vanni. Mercador-Banqueiro Florentino "Estante" em Lisboa nos meados do século XV', *Mémoires do Centro de Estudos de Marinha*. I and published in RAU, *Do Tempo e da História*, vol. IV, Lisbon (1971), 97 ff.

⁵⁰ F. BRAUDEL, *La Méditerranée et le monde méditerranéen...*, Paris (1949), 471; J. HEERS, 'Le commerce des Basques en Méditerranée au XVe siècle', *Bulletin Hispanique* (1955), 292-324.

⁵¹ *Archivio di Stato, Venice, Senato, Mar, reg. 15, c. 145 verso*
 Halkowski-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
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Pisa, often under Florentine instruction, of grain brought from northern Africa and Spain. During the last third of the fifteenth century this was transformed into the run of Madeiran sugar, typically under Genoese account, via Cadiz to the island of Chio in the eastern Mediterranean. If there was a point in common, it was that Portuguese trade remained subject to Italian direction.⁵²

The onset of what amounted to a perpetual grain crisis afflicting the Portuguese kingdom over the course of the early modern period highlights the collapse of Portuguese commercial shipping on European routes from the relatively satisfactory state we have just sketched. Whereas, as we have seen, it was quite common for Portuguese shipping to Antwerp to take on wheat at a number of ports on the French Atlantic coast at the beginning of the fifteenth century, by the sixteenth the Portuguese were almost totally reliant on foreign deliveries to stave off famine, whether from northern France, Antwerp or further afield, northern Germany and Denmark and, increasingly, those vast estates at the eastern edge of Europe that gradually geared the economy of that part of the world, through the seaport of Danzig, to vast cereal monoculture. The increasing incidence of instructions from the King to his factors in Antwerp to secure grain supplies, on occasion demanding specific missions across northern Europe such as was asked of António Marques in 1545, testify to the shortcomings in the market mechanism directing long-distance trade and, most patently, the inavailability of domestic shipping that might have been commandeered.⁵³

As far as successive spice regimes affected Portuguese freight to the Low Countries, we can only affirm that it was undoubtedly prejudiced by the contracts made around 1515 that surrendered the re-export trade of spices from Lisbon to the private market. For it seems that foreign sub-contractors turned to Dutch, Hanseatic and Breton rather than Portuguese shipping. One of the agents for the Fugger and de Haro interests in Antwerp, Wolf Hoeman, loaded a cargo of cloth bound for Lisbon on Gheerard Havercoop of Arnemuiden's *Santa Anna* in August 1507.⁵⁴ In 1510, the Fuggers commissioned the *Ste. Marie de Saint-Pol-de-Léon* to carry sixty quintals or so of pepper from Lisbon to Antwerp. The ship belonged to

⁵² J. HEERS, 'L'Expansion Maritime Portugaise à la fin du Moyen Age: La Méditerranée', in *Revista da Faculdade de Letras de Lisboa*, no. 2, (1956).

⁵³ Letter from António Marques to the King, Antwerp 21 January 1543. A.N.T.T., *Corpo Cronológico*, pte. I, m. 80, d. 16.

⁵⁴ R. DOEHAERD, *Etudes Anversoises. Documents sur le commerce international à Anvers, 1488-1513*, 256-59, *Publications de l'Institut Historique de l'Université de Liège* (2001), Portugal and the European spice trade, 1480-1580
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a certain Pierre Leroy.⁵⁵

But it was not foreign sub-contractors alone who are responsible for the abandonment of Portuguese freight. Even the large Portuguese *conversos* spice consortiums of the latter part of the sixteenth century, such as that of Tomas Ximenes and Ruy Lopez d'Evora, were giving freight contracts out to the German Birckman Company.⁵⁶ And, astonishingly, the Portuguese Crown itself, of which we have record in 1517 sending a charge of spices for delivery to the *feitor* in Antwerp in the bottom of the *Santa Anna*, belonging to one Johann Schacht of Danzig; the return journey, too, which expedited 210 quintals, 86 pounds of copper on the *Madalena*, whose captain, Jois Claes, was apparently Flemish.⁵⁷ So that, if we were to conclude that sub-contracting amounted to a regime which abandoned the interests and the promotion of national freight, then it is clear that the Crown was not prepared to do anything to sustain it even when clear opportunities presented themselves.

These examples would seem to illustrate the trend established by available statistical series. The rolls of Portuguese shipping claiming financial help for damages at Antwerp declines steadily between 1535 and 1551, and for the last seven years not one ship is recorded as loaded with spices.⁵⁸ If we plot this as a regression analysis (see Graph 12), and compare this with that of Portuguese ships returning to Lisbon from India and Malacca between 1540-1580, then we can demonstrate how the decline of Portuguese shipping on the Flanders run is significantly steeper (1:1.27) than that on the Carreira da India (1:3.63) for the same period. Secondly, from the list of anchorage dues paid by foreign ships at Arnemuyden (see Graph 13), an outpost on the River Scheldt that served Middelburg's commercial activities as much as Antwerp's, Portuguese shipping, as counted in units, again seems to have steadily slumped over the period 1518-1571, even with the valid qualification that Portuguese shipping was

⁵⁵ W.S. UNGER, *Bronnen tot de Geschiedenis van Middelburg in den landsheerlijken Tijd*, Rijks Geschiedkundige Publicatiën, vol. 75, The Hague, (1931), vol. III, no. 477; from Stadsarchief Antwerp, *Scheperbrieven*, no. 139, fo. 120r (no. 3642).

⁵⁶ GRAMULLA, *Handelsbeziehungen Kölner Kaufleute zwischen 1500 und 1650*, 336, taken from K. I, II, nr. 701 and Brb. 95, 87. See also H. THIMME, 'Der Handel Kölns am Ende des XVI Jahrhunderts' in *Westdeutsche Zeitschrift für Geschichte und Kunst*, t. XXXI (1912), 455. Another merchant involved in ship freight on this particular run was Hermann Quackart of Cologne. Their names appear in the records as victims of English confiscation, who held that these German ships were acting in solidarity (*Handelsgemeinschaft*) with the Portuguese, at that time an official enemy.

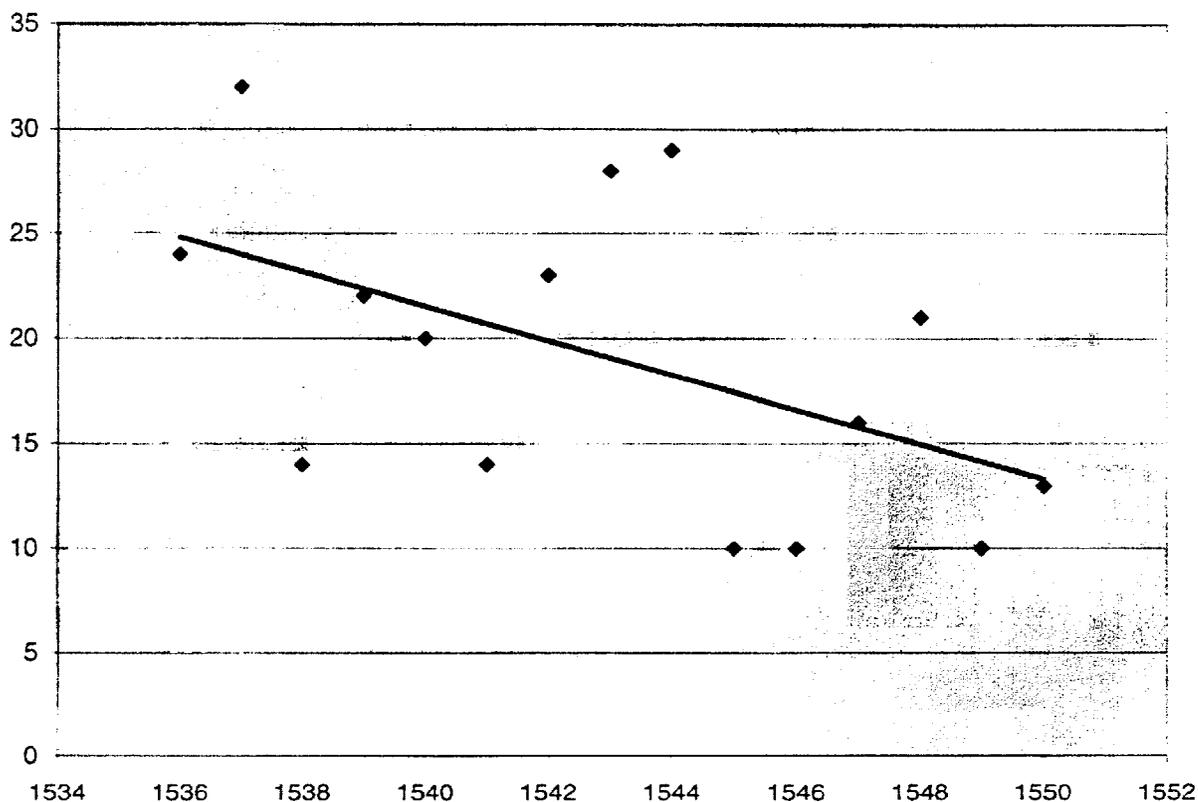
⁵⁷ in DÜRRER, *As Relações Económicas entre Portugal e a Liga Hanseatica desde os últimos anos do século XIV até 1640*, 52, and taken from Ernest KESTNER, 'Danzigs Handel mit Portugal im 16. Jahrhundert', *Zeitschrift des Westpreussischen Geschichtsvereins*, Heft I, Danzig (1880) 99-101; *Arquivo Histórico Portuguez*, vol. VI, 8-11, 396.

⁵⁸ 'Estatística da Carga e dos Barcos Portugueses Entrados com Avarias no Porto de Antuérpia', de 1535 a 1551, taken from Livro no. 209, Feitoria de Flandres and published by V. RAU, Apêndice H, p. I, *Exploração e Comércio do Sal de Setúbal (1495-1511)*, Portugal and the European spice trade, 1480-1580

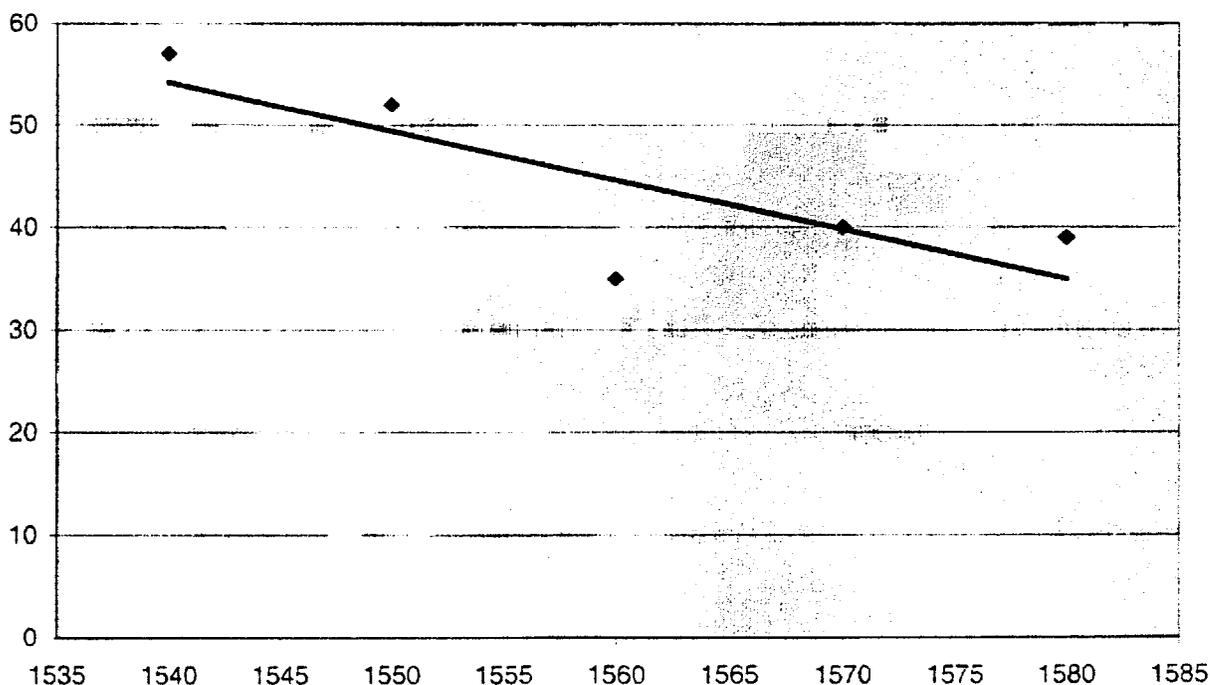


Graph 12. The decline of Portuguese shipping arriving in the port of Antwerp compared to that arriving in the port of Lisbon.

Portuguese ships arriving in the port of Antwerp.

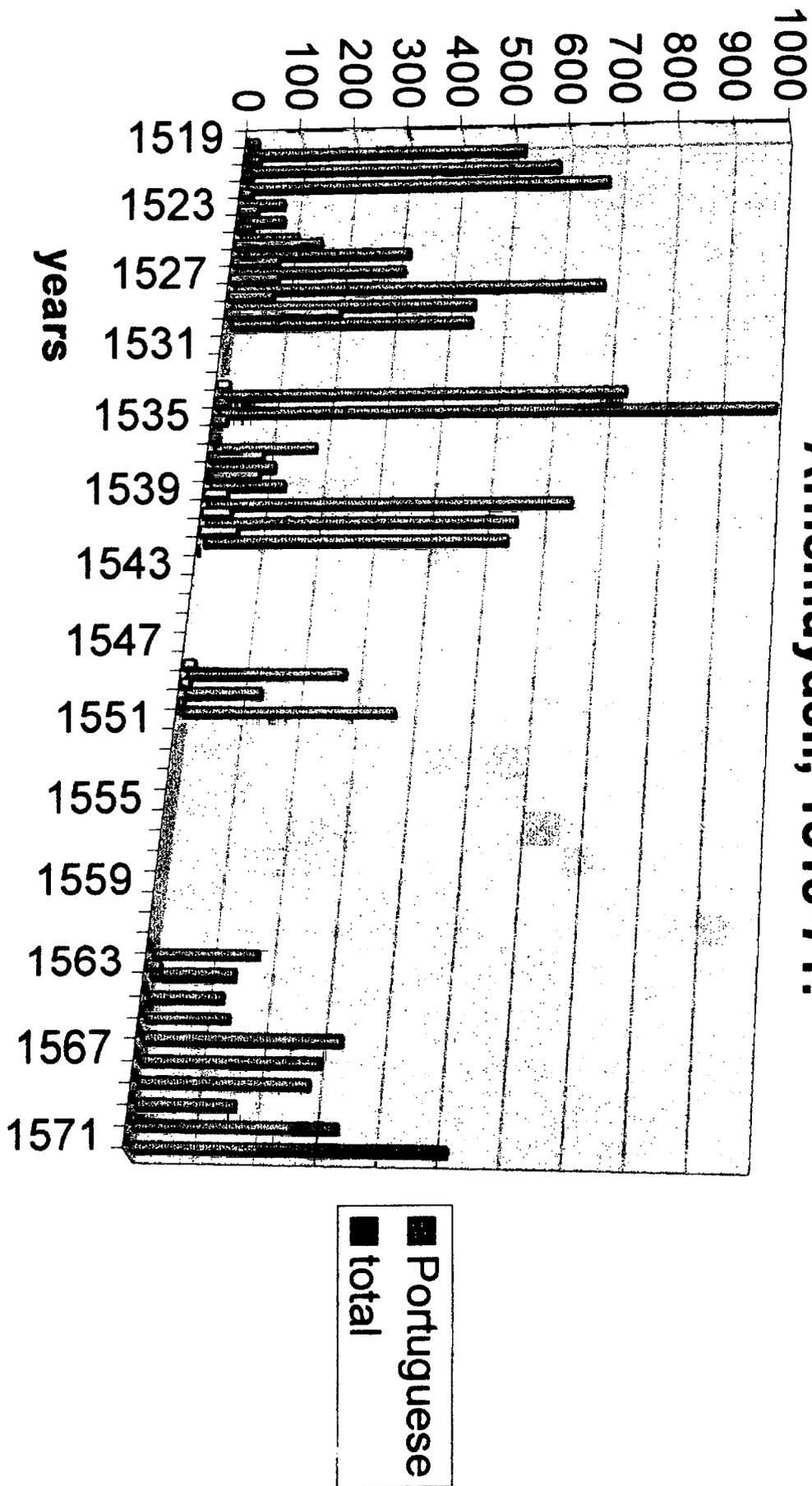


Ships arriving in Lisbon from Asia



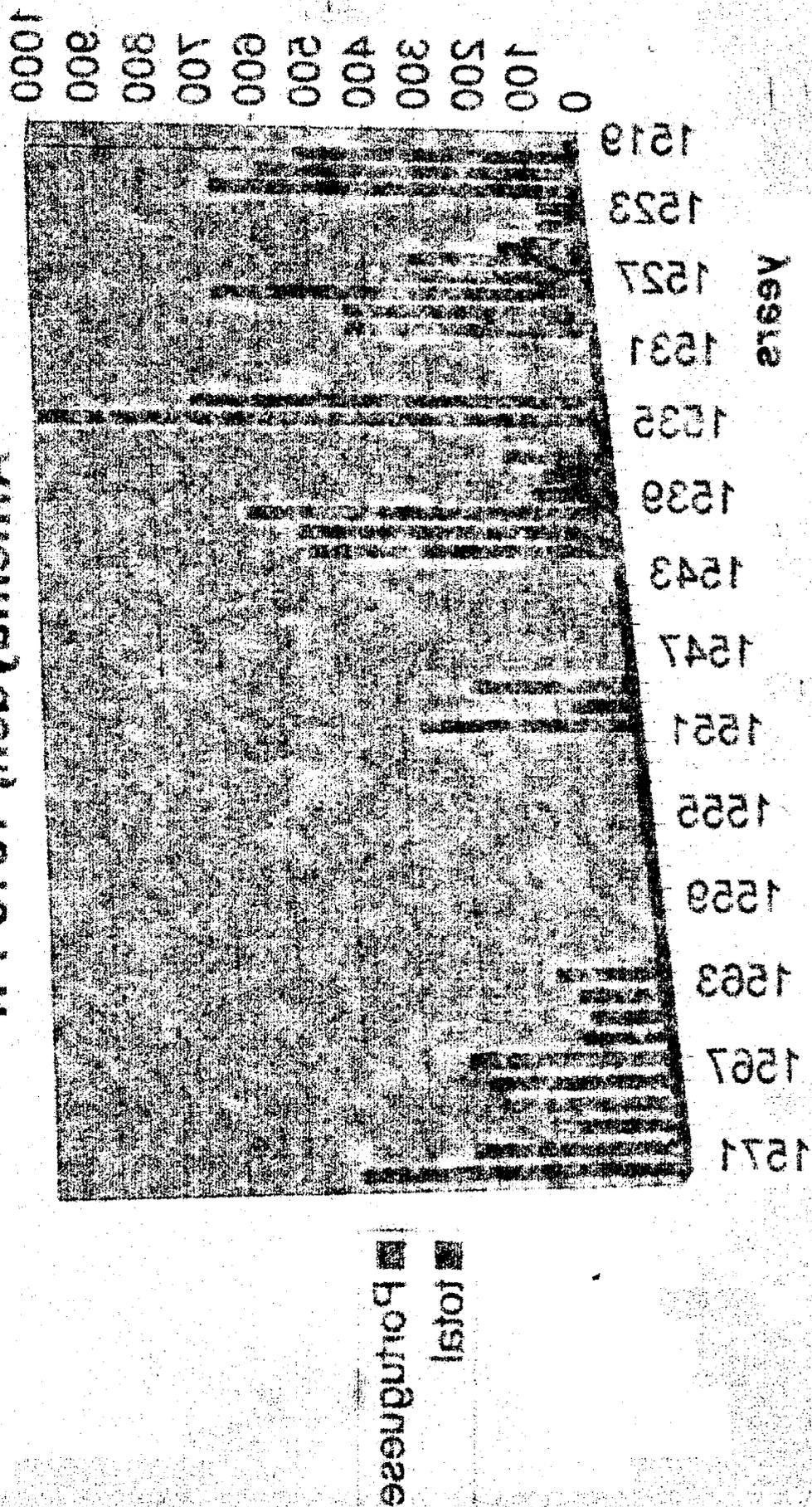


Graph 13. Anchorage lists of foreign ships in Arnhemmyden, 1518-71.



Source: W.S. UNGER, *Bronnen tot de Geschiedenis van Middeldburg in den landsheerlijken Tijd*, vol. III, 818-825.

Figure 13. Annual value of foreign trade in
 Portugal, 1480-1580



characterised by a tendency to upsize the smaller caravel, even if few of the enormous carracks of 1000 tons displacement risked sailing on northern seas.⁵⁹ A third possible indication is supplied to us by Goris: while Portuguese imports still figured as one seventh of Antwerp's total imports in 1551, by 1560 they were reduced to one fifteenth.⁶⁰ But it would be necessary to see the full set of statistics in order to ascertain whether Portuguese imports fell absolutely or whether other imports appreciated in importance. Otherwise, the statistical evidence that Essen brings to light from the Antwerp customs ledger of June 1554 is inconclusive; there are 190 Flemish as oppose to 300 Portuguese and Spanish names, but it is difficult to distinguish between the Spanish and the Portuguese. This becomes doubly a problem with the union of Spain and Portugal in 1580 in that Portuguese nationality is no longer signalled in statistical series of this nature; the decline of Portuguese freight can no longer be monitored. In any case, Essen's personal position, if not denying the active presence of Flemish shipping by 1554, comes down to refuting the traditional idea that this was already a Flemish run route.⁶¹

What kind of a conclusion can we arrive at? The Arnemuyden records would suggest that the decline of Portuguese shipping was a gradual, but absolute one. In Taco Milo's analysis, we should view the French wars between 1540-60 as the decisive death blow.⁶² I would perhaps conclude more cautiously. Essen's customs ledger would point out that Portuguese freight could still stand its ground in the mid-1550s. Twenty years later such a position could not be borne out. After 1560, the great Dutch salt fleets turned their attentions further south of the traditional pick-up points at Bourgneuf to the *salinas* of Spain and Portugal. Out of 250 boats that entered Lisbon or Setúbal over a period of six days in 1577, 160 were either German or Dutch.⁶³ Similarly, by this date, the Mediterranean alum fleets

⁵⁹ Anchorage lists published in W.S. UNGER, *Bronnen tot de Geschiedenis van Middelburg in den landsheerlijken Tijd*, vol. III, p. 818-825.

⁶⁰ J.A. GORIS, *Étude sur les colonies méridionales.*, 194. For 1560 is he using Guicciardini's estimation that of a total import of 21,335,000 gold crowns, only 1 million were Portuguese spices? This would amount to a ratio of 1/21 rather than 1/15.

⁶¹ ESSEN, *Contribution à l'Histoire du Port d'Anvers et du Commerce d'Exportation des Pays-Bas vers l'Espagne et le Portugal*, 18. Compare with the traditional thesis exemplified in Karl Felix RACHFALL, *Wilhelm van Oranien und der niederländische Aufstand*, t. I, Halle (1906), 296.

⁶² T.H. MILO, 'Portuguese Trade and Shipping with the Netherlands after the Discoveries', in *Actas do Congresso Internacional de História dos Descobrimentos* (1963), vol. 3, 423 ff.

⁶³ V. RAU, *A Exploração e o Comércio do Sal de Setúbal*, Lisbon (1951). Where can I get further statistical evidence of this turn-around? BRULEZ calculates that around 1560 the value of French salt imported into the Low Countries amounted to 250,000 guilders, whereas that from Spain and Portugal was only 175,000 guilders, in 'The Balance of Trade of the Netherlands in the Middle of the XVI Century', *Acta Historiae Neerlandica*, 4, (1970), 20-48.

from Tolfa had been overrun by their northern competitors from England and Holland.⁶⁴ So, the definitive change in the freight between Lisbon and Antwerp appears to have taken place over the first years of the Antwerp troubles, whose market, as traditional historiography would be the first to remind us, foreign shipping was the first to abandon. The decline of Portuguese freight, then, whatever its origins, and we have indicated the most fruitful lines of enquiry, seems to have post-dated the downfall of the Feitoria in 1549 and the then-running sales system.

What was the significance, ultimately, of this trend? To Adam Smith, reflecting economic thinking from the time of the mercantilists, 'the carrying trade is the natural effect and symptom of great national wealth'.⁶⁵ The Atlantic route between Flanders and Lisbon, of course, lay historically on one of the crucial nexuses of medieval trade, bridging the fundamental division between the two Europes, North and South, and continued to play a critical role with respect to the Portuguese commercial economy until at least the end of the century.⁶⁶ This axis comes to play, perhaps, an even more significant role in the fortunes of Portuguese history, in the sense that loss of the carrying trade of precious colonial commodities was largely the gain of the Dutch, who ultimately were to take on the Portuguese Empire in the East and constitute the primary manifestation of Portuguese decline. This is an interesting argument, and one that might replace the unsatisfactory account that has prevailed to this day - that Holland pioneered its voyages to the East Indies as a response to the Spanish embargoes issued against trade with Dutch nationals, which disrupted its traditional source of supply of these eastern commodities.⁶⁷ Can we convincingly single out the European carrying trade as the crux of the dynamic that we claim acts as 'see-saw' to the rise and fall of two great European overseas empires? For contemporary commentators like Daniel Defoe, the essence of Dutch economic prosperity lay with her swarming the ranks of trading middleman, the realm of European re-export *par excellence*: the Dutch were:

the carriers of the World, the middle Persons in Trade, the Factors and Brokers of Europe.. they buy to sell

⁶⁴ see DELUMEAU's table, *L'alun de Rome*, Paris (1963), 240.

⁶⁵ ADAM SMITH, *The Wealth of Nations*, New York (1937), 354.

⁶⁶ corroborated, for example, in the report made by the well informed Florentine commentator, Raffael Fantoni. *Relatione del Regno di Portogallo. Fatto da R.F. Fiorenino*, Fondo Confalonieri, 34, fos. 158-160v.

⁶⁷ Jonathan ISRAEL, 'Spain, the Spanish embargoes, and the struggle for the mastery of world trade, 1585-1660', in *Empires and Entrepreneurs. The Dutch, the Spanish Monarchy and the Jews, 1585-1713*, London (1990), 189-212.
 189-212
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again, take in to send out; and the greatest part of their vast Commerce consists in being supply'd from all parts of the World, that they may supply all the World again.⁶⁸

Recent research is more specific. Jonathan Israel has challenged the established idea that the Dutch Republic was built up on the 'bulk' trades, the historical myth of a Baltic *moedernegotie*, and contends that the breakthrough to world primacy (albeit 1590-1609) came about primarily in the Dutch share of the high-value trades, which was the hallmark of the run to the Mediterranean.⁶⁹ Boxer has estimated that by the beginning of the seventeenth century Dutch Levantine trade almost equalled that of the Baltic Sea.⁷⁰ And in any case the two propositions, the Baltic and the Mediterranean, are not mutually exclusive as far as re-distributing spices is concerned. Between the troubles and 1578, the Dutch played an important role, much more so than the fading Hansa, in distributing spices of Portuguese origin to the major European markets across the Baltic, but also across the Channel to London. The Dutch even encroached upon the central European overland trading routes by sailing a good way up the Rhine.⁷¹

But one would have to be careful with the links in this argument. The Lisbon stop-over was party to the traditional 'bulk' trade which transported grain from Poland in return for, besides putative spices, salt for Riga. The so-called 'rich' trades referred here were probably goods from the Levantine runs rather than products of the Far East available at Lisbon; and the Dutch run to the Mediterranean, if the Spanish connection was always an integral part, seems to have ignored Portugal altogether.

12.5. The impact of foreign competition on the re-export trade of Portuguese spices & the dynamic in third markets.

It was Hermann van der Wee who, in his magisterial analysis of the Antwerp market, laid the explanation for the collapse of the Crown Feitoria squarely with the strength of

⁶⁸ DEFOE, *A Plan of the English Commerce*, London (1728), 192.

⁶⁹ Jonathan ISRAEL, *Dutch Primacy in World Trade*, Cambridge (1985), 11. By 'high-value trades' Israel is probably more likely referring to Levantine products than those from the Portuguese East. Did the Dutch combine Levantine and Mediterranean runs with picking up Portuguese colonial goods from Lisbon?

⁷⁰ Charles BOXER, *The Dutch Seaborne Empire*, 22, cf. Kristof GLAMANN, *Dutch-Asiatic Trade, 1620-1740*, Copenhagen & The Hague (1958), 14 ff. might prefer 1650-70 as the hinging point, in that his calculations suggest that Asian goods doubled in value on the Amsterdam market at this time.

⁷¹ see some examples of such Dutch trade in *Revue Britannique* (1830), 93v.
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outside competition, suggesting that the Antwerp staple was steadily undermined from the reappearance of Venetian spices as from the 1530s. This argument is taken to the point of suggesting that the closure of the Feitoria ‘marked the official confirmation of the successful restructuring of the Mediterranean trade’.⁷²

If this, consequently, is the hypothesis that stands to test, it will nonetheless have to be nuanced. Portugal’s trading supremacy was put into jeopardy not only by the regrouping of previous actors like the French and Venetians but both by direct attempts at the seizure and subversion of existing Portuguese trade and the forging of entirely new distributive networks, some of them circuitous attempts to circumvent the Portuguese monopoly of the seas, others perilous Eurasian land routes. For, as Thomas Astley reminds us, the Portuguese quickly ‘put it into the Heads of other Nations, to go on the Discovery of distant Regions’ and, in similar fashion, trade their goods on the European market.⁷³ At the same time, it is worth pointing out that if Portugal was losing third markets, she was not pushed right out of the European market. Indeed, Antwerp remained the staple for Portuguese spices until well after the Crown Feitoria had closed, at least until the 1580s.

I had wanted, beyond sketching the evolution (or regrouping) of Portugal’s trading competitors for spices in broad strokes, an empirical section measuring the flow of spices (as both volume and vector) through third markets along a watershed mark half-way between the Venetian and Antwerp distributive systems. Although not ultimately realisable from a single observation point, this remains a compelling visual idea, the idea of a geographical balancing or equilibrium line indicating the reach of two respective distributive systems in symbiosis. More efficient transport networks and better circulation of information rendered the European market increasingly sensitive to competition, indeed one only need read the Fugger brothers’ correspondance to be informed as to how much spice prices at Venice and Lisbon accorded with one another (*mitbestimten*).⁷⁴ However, with the endemic supply bottlenecks, uncertainty, in part due to piracy and privateering, hoarding and speculation, which did nothing to improve over the sixteenth century, this line could and often swayed over ever larger distances.

⁷² van der WEE, *The Growth of the Antwerp Market*, vol. 2, 156 ff; James TRACY, *The Rise of Merchant Empires*, Cambridge, (1990-91). 30; VAN DER WEE & MATERNÉ, ‘Antwerp as a World Market’, in Jan VAN DER STOCK ed., *Antwerp, story of a metropolis*. 23.

⁷³ Thomas ASTLEY, *A new general collection of voyages and travels: Consisting of the most esteemed relations which have been hitherto published in any language. Comprehending everything remarkable in its kind in Europe, Asia, Africa, and America*, London, (1745-47).

⁷⁴ Hermann KELLENBENZ, ‘Der Pfeffermarkt um 1600 und die Hansestädte’, *Hansische Geschichtsblätter*, no. 74 (1956), 3.
 Halko Wirttilä, Stefan (2001), Portugal and the European spice trade, 1480-1580
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This line had, at times, been pushed to the very limits of one of the respective systems; Godinho informs us that Portuguese spices which had travelled the Cape route were at one time sold at Alexandria itself.⁷⁵ From the reappearance *en force* of Venetian spices around 1530, even with those quantities of Mediterranean spices that dribbled on to the European market in 1515, prices on the Antwerp market, until then buoyed up by the Portuguese monopoly, were affected. So that this line, on occasions, stretched right up to the Scheldt port itself, whether as a result of Venetian spices that had been brought directly to Antwerp by the sea route, or else percolated up the lengthy overland route, for which we find testimony in the commercial statistics compiled by Doehaerd.

The task ahead is a difficult one. It must be borne in mind, as Jeannin reminds us, that mapping the geographical movements of trade will never result with the 'precision of a coast-line', and that 'pointillist images.. may throw a brief light on some short branch of a wider route', but that a comprehensive vision will ever elude.⁷⁶ It is difficult to understand, for example, how at a time when the Levantine route via Venice was meant to be carrying as much as ever, the Genoese managed to export 50 bales of pepper between 1542-1545 from Antwerp to Venice.⁷⁷ There are ever apparent source restraints. The Poznań records, for example, which have been the subject of many studies, make no distinction between goods coming in and going out.⁷⁸ In some instances, as the accounts of Winchester College exemplify, we are told from where supplies of colonial goods were brought, be it Salisbury, Southampton or London, from which we can gain a glimpse of the redistributive networks of such commodities at close range.⁷⁹ But in most cases, such as the Cologne duty records, it is impossible to distinguish the origin of the incoming spices, and by extension, whether they were Venetian or Portuguese.⁸⁰ The direction of trade was recorded, on the other hand, in

⁷⁵ cited in Ralph DAVIS, 'Comparative advantages of the Levant and Cape routes to India in the sixteenth and seventeenth centuries', in *Sviluppo e sottosviluppo in Europa e Fuori d'Europa dal secolo XIII alla rivoluzione industriale. Atti delle "Settimane di Studio" e altri convegni*, 10, Le Monnier, (1983), 479.

⁷⁶ Pierre JEANNIN, 'The Sea-borne and the Overland Trade Routes to Northern Europe in the XVIth and XVIIth Centuries', *Journal of European Economic History*, vol. 11, no. 1, Rome (1982), 10.

⁷⁷ Colette BECK, *La Nation Génoise à Anvers, 1528-55*, 278, from the Registres de taxes kept in the Chambres des Comptes of the Archives Générales du Royaume, Brussels.

⁷⁸ H. SAMSONOWICZ, 'Über Fragen des Landhandels Polens mit Westeuropa im 15/16 Jahrhundert', in *Neue Hansische Studien*, ed. K. Fritze, E. Müller-Mertens, J. Schildauer, E. Voigt, Berlin (1970), 320-321.

⁷⁹ Lord BEVERIDGE et. al., *Prices and Wages in England from the Twelfth to the Nineteenth Century*, London: Cass, (1965), vol. I. Price Tables, Mercantile Era.

⁸⁰ GRAMULLA, *Handelsbeziehungen Kölner Kaufleute zwischen 1500 und 1650*, Köln-Vienna (1972), c. 320. Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580 European University Institute

the tax receipts collected between 1543-45 on commercial traffic running the Brenner pass, though the commodities carried were not broken up clearly enough for us to attempt an estimation of trade flows in spices, suffice it to say that 32% of overall traffic ran north-south.⁸¹ Gascon's work on the Lyon toll records (*les carnets du garbeau*) is a model for research - probably the finest crafted and most complete in such a line of investigation - but he was undoubtedly aided by the fact that he could infer from the recorded city gate of entry from which port the spices were flowing.⁸²

Gascon's choice of Lyon as the weathervane at the crossroads of the European spice trade might nevertheless be bettered, as French international routes lay a little off the principal artery between northern and southern Europe, that is the Venetian and Portuguese-Antwerp distributive systems. This principal artery ran up the left bank of the Rhine via Basel and over the St. Gotthard pass into Italy, though international traffic serving Venice was also wooed across the eastern flank of the Alps, either on the Lower Great Tirol Route (*untere Große Tirolerstrasse*) via the Brenner and Innsbruck to Augsburg, or latterly up the Isar to Munich and then Nuremberg, or else, from 1519 when it was completed, the lengthier low road to Salzburg, which had the virtue of lower tolls.⁸³ Ideally, then, this third market might be Frankfurt, Nuremberg or else Vienna, each of which has a fair claim, a good way up the mainstream of either Venetian or Antwerp redistributive arteries. Frankfurt is brought up specifically in the *Chronijck van Nederlant*, where it is stated that 'spices were transported from Antwerp to Frankfurt, whereas previously it was the opposite' (via Venice and Genoa); Guicciardini ratifies the drift, suggesting that the spice merchants south of Cologne dealt with 'drugs, even those which came to them overland from Venice previously' (*drogues mesmes qui leur venoyent par terre de Venise avant*).⁸⁴ Jost Amman's allegory on trade written around 1585 makes it clear that Nuremberg was equally at home importing from Venice as from Antwerp.⁸⁵ And between 1512/3 even Viennese retailers, who had previously depended upon Venetian supply, petitioned Maximilian urging him not to close his states to foreign

⁸¹ Otto STOLZ, *Geschichte des Zollwesens, Verkehrs und Handels in Tirol und Voralberg*, Innsbruck (1953) and IDEM. 'Verkehrsgeschichte der Brenner- und Reschenstrasse', in *Grossdeutscher Verkehr* (1942).

⁸² R. GASCON, 'Un siècle du commerce des épices à Lyon (fin XVe-fin XVIIe siècles)', *Annales E.S.C.*, (1960).

⁸³ Hermann KELLENBENZ, 'Landverkehr, Fluss- und Seeschiffahrt im Europäischen handel', *Actes du Septième Colloque International d'Histoire Maritime*, Vienna (1965), 86, 122.

⁸⁴ as cited in J. MATERNÉ, 'L'heure d'Anvers, marché des épices portugaises', in *C.G.E.R.*, (1992), 171; L. GUICCIARDINI, 130.

⁸⁵ Jost Am(m)an's large, engraved allegory of commerce is reproduced in part in E. COORNAERT, *Les Hanse et le Commerce International en Europe*, 1961, pp. 41-42, 158-136.

merchants who were offering to forward consignments of spices from Antwerp, Frankfurt and Nurnberg.⁸⁶

It is indicative that the Viennese retailers did not direct themselves to Buda. It would not appear, then, that spices were flowing this far up the overland route from the Black Sea basin, be it via Constantinople and Belgrade, or the ex-Genoese trading colony of Kilia and then on via Nagyszeben (Sibiu). The registers of the customs station at neighbouring Pozsony (Pressburg, Bratislava) have suggested, albeit for a slightly earlier period, that spices were flowing west-east rather than vice versa.⁸⁷ We would have to go a little further to the east, to Buda itself, or up to Krakow, to find an emporium where the provenance of spices was complicated by a third flow of trade, this time coming in from the east.

12.51. *The challenge of the old routes.*

Our task in discerning the clientage configurations of Europe's principal suppliers of oriental spices is made a little easier by the fact that the Venetian marketing circumnavigation (*périple*) to the principal markets of northwestern Europe, after several interruptions, virtually ceased after 1509. Another fleet is signalled in 1518, though it appears that the principal commodity carried was wine, and if there was a healthy stock of ginger and a few cloves, pepper was almost entirely lacking. In 1519, another galley fleet was sent, but was forced to dock in Bruges. Maximilian, it seems, was hostile to Venetian trade in Antwerp for political reasons. A final two fleets are recorded in 1521 and 1531, but they were contemptuously received in England, being instructed that it was not worth their while to return.⁸⁸

Venice nevertheless played the role of primary competitor to the Portuguese for the entire length of the sixteenth century. Much has been said about this contest, so I shall limit myself to summarising the conclusions of the debate pitching the Venetian

⁸⁶ MATERNÉ, 'L'heure d'Anvers, marché des épices portugaises', in *C.G.E.R.*, (1992), 171; VEIT, *Handel und Wandel mit aller Welt. Aus Nürnbergs grosser Zeit*, Munich (1960), 14; W. HEYD, *Histoire du commerce du Levant au Moyen Âge*, 550, citing the *Archiv für Kunde oesterreichischer Geschichtsquellen*, XIV (1855), 272 ff.

⁸⁷ F. KOVÁTS, *Nyugat-Magyarország áruforgalma a XV. században a pozsonyi harmincadkönyv alapján*, Budapest (1902), 78-81.

⁸⁸ A.A. RUDDOCK, *Italian Merchants and Shipping in Southampton, 1270-1600*, Southampton (1951), 222-230, using documentation in the Calendar of State Papers, Venice. Messer Aloigi, son of Giovanni Rocinotto, who made two seaborne journeys to India and has left an account, writes of serving in the *galee di Fiandra* in the year 1532. Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580

Levantine/Mediterranean against the Portuguese Atlantic supply routes.⁸⁹ Ultimately, it seems that the Portuguese trade little damaged that of Venice and the Mediterranean in general.⁹⁰ A lot of the 'crisis' can be readily explained with recourse to political unrest, war and temporary supply bottlenecks, rather than any deep-seated structural change. Even in the first fifteen years of the sixteenth century when the Venetians disappeared from view, a mix of Ragusan, Catalan, Genoese and French merchants readily replaced them in the habitual ports of purchase. This period has even been described as something of a golden age for Ragusan trade with Egypt, from where five or six ships a year were regularly despatched, and whose spices were re-exported to a variety of southern Italian and French destinations, such as Sicily, Puglia, Aigues-Mortes, the last supplying the Lyon fairs.⁹¹ Venetians jealously reported on a heavy cargo of spices carried off by the Genoese from Tripoli early in 1510, and Priuli records how abundant Egyptian spices were on the Lyon market in 1506 as a result of a series of ventures by a group of merchants from Nice.⁹² Horst confirms that Levantine spices continued to appear at the Antwerp fairs in 1504, 1505, 1508 and 1510.⁹³

If there was nevertheless a temporary enfeebling of the Mediterranean spice trade during the first two decades of the sixteenth century, as can be witnessed from the Atlantic provenance of these same commodities at the Lyon fairs, one can talk of a healthy *reprise* from the 1520s, when Venice recovered a regular trade of around two-and-a-half million pounds (\approx 21.800 quintals) of spice a year.⁹⁴ At the Lyon fairs in 1525-1526, at least 51.8%

⁸⁹ surveyed for the second half of the sixteenth century with great attention by Fernand BRAUDEL in 'The Pepper Trade', *The Mediterranean World* . . ., 543-569.

⁹⁰ Gino LUZZATTO, 'La Decadenza di Venezia dopo le Scoperte Geografiche nella tradizione e nella realtà', *Archivio Veneto*, quinta serie LIV-LV (1954), especially footnote #1, 167. The traditional view, passed down from Portuguese contemporary rhetoric through Adam Smith and Wilhelm Heyd's classic *Die Geschichte des Levantehandels im Mittelalter*, published in 1879, had suggested that the appearance of the Portuguese in the Indian Ocean sounded the death knell of Venetian long-distance trade, see for example João Lucio de AZEVEDO, 'Portugal em pouco tempo esbulhou Veneza e Génova, e os portos levantinos, da maior parte dos lucros do comércio asiático', *Elementos para a historia económica de Portugal. Seculos XII-XVII*, Lisboa (1990), 106.

⁹¹ Nicholas MIRKOVITCH, 'Ragusa and the Portuguese spice trade', *The Slavonic and East European Review*, 21 (1943), 174-187.

⁹² Girolamo PRIULI, *I Diarii* . . ., II, p. 419. Ludovico di VARTEMA confirmed a healthy state of supply in spices during his travels across Egypt, Syria and the Red Sea regions between 1503-05.

⁹³ W.A. HORST, 'Antwerpen als specerijenmarkt', *Tijdschrift voor Geschiedenis*, 51, (1936), 333.

⁹⁴ S.Y. LABIB, *Handelsgeschichte Ägyptens im Spätmittelalter (1171-1517)*, V.S.W.G., Beihefte, 46, Wiesbaden 1965, 1028. (2001), Portugal and the European spice trade, 1480-1580
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of imported spice was Levantine.⁹⁵ By 1550, the Levantine route via Venice was carrying as much as ever.

There followed an era of strong competition with the Portuguese for European markets between 1550 and 1570, when war broke out between Venice and the Ottomans for Cyprus. Alongside Venice, other parties benefited from this Mediterranean *reprise*; the French, as we shall see below, but also other Italian city states such as Ancona, whose Jewish trading population plied a lively trade with the Levant. Antwerp was in time replaced by Hamburg as the major centre of commercial redistribution in northern Europe but, for a while, as Atlantic re-export routes were disrupted by the Hispano-Dutch war, a significant number of dispatches of Portuguese spice were made directly to Venice. This is the case with four ships in 1577, a pepper consignment directed to the Bonvisi and Company on the Ximenes' account in 1580, and a spate of cargoes on board ships like the *Manizella* and *Barozza* in the latter part of that decade and that were received enthusiastically by German buyers working for reactivated trading agencies in that city, like the *Otti*.⁹⁶ With this phenomenon we see the collapse of any meaningful trading rivalry between Venice and Portugal for third markets; their re-export trajectories were no longer distinguishable. In any case, the spice trade was soon to be overwhelmed by the entry of the Dutch and English, who had seized control of 80% of the trade by the 1620s, and who pioneered their own redistributive routes through the northern ports and up the river systems to the Frankfurt fairs and other German localities. Marseille rather than Venice was elected as the primary distribution point for the Mediterranean market. Venetian customs' officials were already slow to reflect the new realities, when in 1625 spices were officially reclassified, for customs purposes, as 'western commodities'.⁹⁷

It is a great handicap that no statistical series have availed themselves to us. Part of the problem is the deregulation of the Venetian mercantile system - beyond 1530, when the public auctions for the Alexandria and Beirut galleys ceased, we no longer have state records. Estimates have been made for the 'crisis' of the Venetian merchant marine, which roughly

⁹⁵ R. GASCON, 'Un siècle du commerce des épices à Lyon', *Annales E.S.C.* (1960), 664.

⁹⁶ BRAUDEL, *The Mediterranean and the Mediterranean world in the age of Philip II*, London: Collins (1972), I, 556 from Archivio di Stato, Venezia. Busta 538, fo. 846 and v.; DOBEL, *Über einen Pfefferhandel der Welser und Fugger, 1586-91*, *Zeitschrift des historischen Vereins für Schwaben und Neuburg*, 13, (1886), 134; also KELLENBENZ, 'Autour de 1600: le commerce du poivre des Fugger et le marché internationale du poivre', *E.S.C.*, no. 11, Paris (1956), 22.

⁹⁷ Archivio di Stato di Venezia. Arte della Seta. busta 109/203, (1608) and D. SELLA, 'Crisis and Change in Venetian Trade', in B. PULLAN ed. *Crisis and Change in the Venetian Economy in the 16th and 17th Centuries*, London: Smith, Stefan (2004), Portugal and the European spice trade, 1480-1580
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halved between 1560-1600. But even these supply us with the number of ships rather than the quantities of purchases, and give no indication of the number of private vessels accompanying the *mude*.

12.52 *The French: between scurries in the Atlantic and the promotion of Marseilles.*

The French had participated in the Levantine spice trade for much of the Middle Ages, culminating with the ambitious schemes championed by Jacques Coeur (1395-1456) to keep a permanent fleet at sea to rival that of the Venetians. Thereafter, the French were eclipsed, which is often explained as a period of withdrawal (*repliés sur soi*); even the southern French cities like Lyon and Marseille fell under the sway of Flemish spices.⁹⁸ The hegemony of Antwerp worked in some way to provoke the French to break that entrepot of colonial goods to the advantage of its own, initially at Rouen. In this task, the French benefited from English connivance, as was established by a treaty signed between François I and Henry VIII in 1527.⁹⁹ Even the frustrated Portuguese envoy, Doctor Gaspar Vaz, at one stage perceived this as a possible concession leading out of the impasse over the *cartas de marca*.¹⁰⁰

But the French Crown would have preferred to see its own nationals supplying the French market. Norman and Breton pirates had actively plundered the west coast of Africa from the end of the fifteenth century, bringing back fair size quantities of malagueta and *pimenta de rabo*.¹⁰¹ The initial lead Gonville had established when he set sail for the Spiceries in 1503 was followed up by a series of expeditions from Le Havre from June 1523 and that had been backed financially by the Florentine Rucellai bank and the Bautier of Lyon.¹⁰² But, despite repeated attempts and some of the best Portuguese pilots of the day, such as Estevão da Gama, these adventures suffered terrible losses of human life and returned with little to boast of. Frequently deflected on to the coast of Brazil, the quest for oriental

⁹⁸ MATERNÉ, 'L'heure d'Anvers, marché des épices portugaises', in *C.G.E.R.*, (1992), 171; for Lyon, VAN DER WEE, *The Growth of the Antwerp Market.*, vol. 2, 127 ff.

⁹⁹ see SANTARÉM, *Quadro elementar das relações políticas e diplomáticas de Portugal com as diversas potencias do mundo.*, Lisbon (1842-60), v. III, 225.

¹⁰⁰ letter from G. Vaz to D. João III, 19 October 1531, published in M.E. GOMES DE CARVALHO, *Dom João e os Franceses*, Lisbon (1909), 51-52 and BLAKE, *European Beginnings in West Africa, 1454-1578*, (1937), 115.

¹⁰¹ M. MOLLAT, *Le commerce maritime normand à la fin du moyen age*, Paris (1952).

¹⁰² M.D. AVEZAC, *Campagne du navire 'L'Espoir de Honfleur', 1503-05, Relation authentique du voyage de Honfleur à la Côte d'Or (2002), Rouen et les Indes*, Paris, (1869) 580

spices became commuted from around 1515 to the more realistic commerce in brazil wood.¹⁰³ The two Verrazano brothers, despite pretensions to arriving in the Spiceries of the East, ended up with four consecutive voyages to the New World from French Atlantic ports.¹⁰⁴ Only the voyage of the two Parmentier brothers at the end of the 1520s succeeded in entering the Indian Ocean, indeed making it as far as the Indonesian archipelago, the first to Sumatra, the second to what then became known as les Îles Parmentières (Batoc, Paulo Pini, Tanah Mara, Tanah Balla), with a landing at Ticou in the Maldives, mistakenly thought to be the Moluccas, where seven *poinçons* (a ton) of pepper were taken on.¹⁰⁵ But if François I personally read the account of the voyage, the enterprise was not judged worth pursuing for the risks involved, and policy thereafter amounted to the free pillage of Portuguese shipping on its way up to Flanders under the infamous *lettres de marque*.

Without an independent source of supply, the French were unable to create their own national market beyond the relatively small quantities of spices coming in to the country from the plunder of shipping on its way to the market at Antwerp. Besides, active support from the French King for these expeditions targetting the sources of supply in the East had been unforthcoming despite some forceful lobbying from private promoters, the backing of Admiral Chabot and the lease of vessels by Jean Ango. Coornaert, meanwhile, has drawn attention to the continuing stream of French business at Antwerp as declared to notaries there, particularly in the luxury sectors of precious stones and diamonds.¹⁰⁶

But the dogged perseverance with which the French Crown sought to wrestle the country free of luxuries imported through foreign intermediaries, and thus to establish a national market supplied by national tradesmen, found its cause with the forceful promotion of Marseille in symbiosis with the (re-)establishment of trading colonies in the Levant.¹⁰⁷ An agreement was reached in 1536 with Suleyman I opening all Turkish ports to French commerce.¹⁰⁸ But Marseille benefited particularly from an edict of 4 January, 1540, by which the importation of spices was forbidden outside selected national ports, although to

¹⁰³ John L. VOGT, *Portuguese Exploration in Brazil..* (1967), 164.

¹⁰⁴ Alessandro BACCHIANI, 'Giovanni da Verrazano e le sue scoperte nell' America settentrionale', in *Bollettino della Reale Societa Geografica Italiana*, vol. XLXI, November (1909).

¹⁰⁵ SCHEFER, 'Le Discours de la navigation de Jean et Raoul Parmentier de Dieppe; Voyage à Sumatra en 1529', in *Receuil voy. doc. hist. géogr.*, t. IV, Paris (1883).

¹⁰⁶ E. COORNAERT, *Anvers et le commerce parisien au XVIe siècle*, Bruxelles (1950).

¹⁰⁷ see Raymond COLLIER & Joseph BILLILOUD, *Histoire du Commerce de Marseille*, Paris (1951).

¹⁰⁸ the treaty is discussed in Martin HARTMANN, 'Die islamisch-frankischen Staatsvertraege (Kapitulationen)', *Zeitschrift für Politik*, 91, (1918), 164.
Halikowski-Smith, Stefan (2001) Portugal and the European spice trade, 1480-1580
 European University Institute

some extent the ban was circumvented.¹⁰⁹ And France became a vigorous competitor to the Portuguese with the Venetian involvement in the War of Cyprus between 1570-73, during which the French successfully courted the Ottoman sultans for exclusive trade concessions in the Levant as the Turks actively sought allies in their struggle against the array of the united Habsburg block's power.¹¹⁰ France, then, was the first European country to challenge the principle of re-export, and with it the backbone of the Portuguese and Venetian economies. Thus we see the share of spices entering through the city gates of Lyon and that were imported from Antwerp decline progressively, slipping from more than a third, in the best years, to at most a fifth in 1530, to less than an eighth in 1543-4.¹¹¹ Other sources confirm that this was no freak but the direct consequences of increasing spice imports through Marseille. To the point that not only were the Portuguese deprived of access to the French national market, but that Portuguese sales to third parties on the Antwerp market were themselves adversely affected by falling prices. This at least is the message relayed in a letter to the Venice correspondent of the van Molen and despatched on March 1, 1539; between April and June 1540 there was an acute concern that a number of northern European markets would be flooded by French spices.¹¹² Marseille was re-exporting spices across the Mediterranean equally, to Barcelona, Valencia and the Balearics.¹¹³ That France launched this challenge in the very period here under question forces one to take stock of Barata's insistence that it was French competition that did more than anything else to determine the fall of Portuguese Crown trading at Antwerp in 1549.¹¹⁴

¹⁰⁹ P. MASSON, *Histoire du Commerce Français dans le Levant au XVIIe Siècle* (1896), XI. Consider next to Lach's suggestions that spice imports continued under cover of ordinary goods from Genoa et. al. places, *Asia in the making of Europe*, 125. And the *Compte de receveur Gaspar Ducci de la recette de 6 pour cent sur toutes marchandises que durant cette guerre l'on charge ou amène de France*, which suggests that between February 1543 and September 1544 Jean-Charles Affaitau paid 400 flemish pounds in entry duties on cloth and pepper entering France from Antwerp, Stadsarchief, Trésorerie, no. 55.

¹¹⁰ see Frederic LANE, *Venice and History*, Baltimore (1966), 293; c.f. COLLIER & BILLIQUOD, *Histoire du Commerce de Marseille*, Paris (1951), III, 83 ff.

¹¹¹ R. GASCON, 'Un siècle du commerce des épices à Lyon', (1960). Note nevertheless that the slip of Antwerp spices figuring in the Lyon records doesn't necessarily preclude the possibility that imported spices were now coming in from elsewhere, from ports such as Bayonne.

¹¹² ('le nave che per giornata vengono a Marseglia in Provençia, le quale sortirano tutta la Francia e parte de questi paexi'). Extracts from the van der Molen copy-book of letters written between 1538-44 examined by De ROOVER, 'The market for spices in Antwerp, 1538-44', (1938), 216.

¹¹³ see V.L. BOURILLY, 'Histoire économique de la Provence de 1482 a 1789. Le XVIe siècle', pp. 179-180, in P. MASSON, *Les Bouches du Rhone. Encyclopedie departementale*, Marseilles (1921).

12.53. *Spain: rather the discovery of new sources of supply in the New World.*

Spanish interference in the dynamics of the European market for spices is a further force to be reckoned with, as the curious and intriguing letter of the feitor at Antwerp, Lourenço Lopes, regarding the competition of 'Charles V's spices' (*as especiarias de Carlos V*) on the market at Antwerp, suggests.¹¹⁵ This was in all events rather little the result of Spanish incursions on traditional sources of supply in the East, which was confined to the winnings of a single fleet, initially led by Ferdinand Magellan, and which successfully made a circumnavigation of the globe via the Moluccas to arrive home in September 1522. Offered for sale by the Spanish Crown at La Coruña where, in strict replication of the Portuguese prototype, a Casa de Contración del Maluco had been somewhat precociously established under the superintendency of the Burgos spice marketer Cristóbal de Haro. Hans Ehinger proceeded to buy the greater part of the clove cargo for 20.000 ducats.¹¹⁶ Three further fleets were launched from Spanish ports for the Spiceries over the forthcoming years under Garcia Jofre de Loaisa, Sebastian Cabot and Diego García but, for a multiplicity of reasons, never returned or were diverted into the search for reputed mines near the Rio Parana. With the signing of the Treaty of Saragossa in April 1529 it seemed that Spanish pretensions over the Moluccas were brought to an end, so that even when Spanish adventurers such as Juan Gaetan related the discovery of propitious new routes to the Moluccas across the isthmus of Panama in 1542 - 'by this way you can get them [spices] across with the greatest ease' (*quivi le faranno passar con grandissima facilità*) - the information was not acted upon by the Spanish authorities.¹¹⁷ Only with the establishment of the Spanish in the Philippines from 1565 following Legazpi's expedition was the issue of interference in the spice trade of the Moluccas re-opened.

The Spanish involvement with spices had rather more to do with sources of supply yielded by the New World, or with a deliberate policy of planting there. Columbus' voyages to the West Indies yielded the pimiento, or *aji*, as it was known by the natives of San Salvador, while allspice was found on Jamaica. Cassia, imported from Ethiopia into Europe,

¹¹⁵ letter of 29 May 1515, A.N.T.T., C.C., I, 17, doc. 130.

¹¹⁶ HAEBLER, *Die überseeischen Unternehmungen der Welser und ihrer Gesellschafter*, (1903), 44; Karl H. PANHORST, *Deutschland und Amerika. Ein Rückblick auf das Zeitalter der Entdeckungen und die ersten deutsch-amerikanischen Verbindungen unter besonderer Beachtung der Unternehmungen der Fugger und Welser*, Munich, (1928), 79; Jose Toribio MEDINA, *Coleccion de documentos ineditos para la historia de Chile desde el viaje de Magellanes hasta la batalla de Maipo, 1518-1818*, 30 vols. (Santiago: Impr. Ercilla, 1888-1902), 2:219, 235.

¹¹⁷ The journey of Iuan Gaetan is included in the 'Discorso di M. Gio. Battista Ramusio sopra varii viaggi per li quali sono state condotte fino a' tempi nostri le spezierie e altri nuovo che si potriano usare pre condurle', *Ramusio, Navigazioni e Viaggi*, Milan (repr. Einaudi: 1979) vol. II, 995-1002.

was acclimatised in Santo Domingo from seeds around 1514. But the most impressive of the transplantings was surely ginger, introduced to Mexico in 1530, and which burgeoned, particularly in Puerto Rico: if we are to believe Francisco Guerra, by 1547 up to 4 million pounds arrived in Seville, though I think he may mean 400.000 pounds, for Chaunu, a more reliable source, indicates a steady growth in exports between 1581-1615, leading up to a figure of 2.240.000 lbs. exported in 1587.¹¹⁸

12.54. *The English and the search for a northern passage.*

The English meanwhile had long been actively engaged in searching for an alternative route to the Spiceries that might, in the words of a state paper drawn up in 1575, 'passe saiflie, without dainger of the Turk and without knowledge of Italy and Spayne, and without any lycens of the King of Portugale'.¹¹⁹ As early as 1496, Sebastian Cabot had secured the backing of King Henry VII for the search for a north-west passage, a project that intended 'to saile by the West into the East where spices growe, by a way that was never knowen before.. and by a shorter tract come into India'.¹²⁰ But like the three Frobisher expeditions that followed in the 1570s, no passage was found: the navigators were disheartened to find the coastline veering to the east the further they went north and possible straits mere inlets. Francis Drake eighty years later did not contemplate taking his ship through any other passage than the Magellan Straits on his way to the Spice Islands and circumnavigation of the globe.

Parallel to the search for a north-west passage were the attempts to discover a north-east passage. Adopted as an overriding aim of the early Russia Company, the passage was similarly perceived as a means of getting to those 'fabulous riches of the East'. Thomas Edge's account of the first expedition suggests its leaders were 'incited with the fame of the great masse of riches which the Portugals and Spaniards brought home yeerely from both the

¹¹⁸ Francisco GUERRA, 'Drugs from the Indies and the Political Economy of the Sixteenth century', in FLORKIN, M. ed. 'Materia medica in the Sixteenth Century. Being the Proceedings of the First Symposium of the International Academy of the History of Medicine, Univ. of Basel, Sept. 1964', *Analecta medico-historica*, Oxford: Pergamon Press, (1966), 38; Pierre CHAUNU, *Séville et l'Atlantique. Partie interpretative*, Paris: SEVPEN (1959), 4 vols.

¹¹⁹ signed M[ichael] Lok, 8^o, Maii, 1575 and reproduced in HAKLUYT, *Russia at the Close of the Sixteenth Century...*, xi.

¹²⁰ HAKLUYT, 'A discourse of Sebastian Cabot touching his discovery of part of the West India out of England in the time of king Henry the seventh, used to Galeacius Butrigarius the Popes Legate in Spain, and reported by the sayd Legate in this sort', in *The Principal Navigations, voyages, traffiques and discoveries of the English nation, Everyman's Library edition London (1926)*, vol. IV, 85-87.

Indies'.¹²¹ This first expedition was led by Sir Hugh Willoughby and backed by Northumberland and a number of other merchants in 1553, and failed. But, as with the search for the Northwest passage, the objectives of the expeditions were pragmatically re-scaled; if the former turned into a treasure hunt for rare ores, the search for the Northeast passage switched its attentions to the more realistic goals of the natural products of Russia. On the second attempt, the expedition was sent not across the icy northern seas to Cathay, but with Anthony Jenkinson in 1558-9 via the east coast of the Caspian to Bokhara and thence to Kazan, from where 'craskoe [calicoes] and raw silkes' were to figure as the principal purchases. A memorandum eleven years later recalled this 'attempt to bring Peper, and other spices through the Mare Caspium' and reported that the Company 'doe intend.. to preseguate it throughlie'.¹²² But this never seems to have materialised and the English, despite a series of bold attempts, were unable to alter the existing routes and points of entry of oriental spices into Europe before the formation of the East India Company and Captain Lancaster's maiden voyage to Sumatra in December 1600.

12.55. Overland routes from the East, a problematic source of supply.

Jenkinson's expedition nevertheless conveniently raises the issue of whether significant quantities of spices were flowing into Europe from its expansive eastern perimeter (see Map 5). For Jenkinson's project had been prefigured by a proposal made to King Henry VIII by a remarkable Genoese merchant, Paolo Centurione, who subsequently died in his service in 1525. Centurione, who had initially been sent to the Muscovite court as the representative of Pope Leo X, long craved the idea of opening a land route with the Indies across Tartary and the Caspian with a long river section up the Volga, through Livonia and thence into the Baltic. Treated with diffidence in Moscow, Centurione nevertheless tried hard to tempt the interest of Tartar warlords, and when that got nowhere, the English monarch. And, as we have seen, this project did not die with Centurione; Ramusio stimulated its propagation, suggesting that the Duke of Moscow 'would have much gain and ease in penetrating India and arriving at the Kingdom of Cathay' (*arebbe gran commodità e facilità di penetrar nell' Indie e venire*

¹²¹ Samuel PURCHAS, *Hakluytus Posthumus or Purchas his Pilgrimes Contayning a History of the World in Sea Voyages and Lande Travells by Englishmen & others*, Glasgow, (1905-07), vol. xiii, 5; Thomas Edge's account of the first expedition is described in T.S. WILLAN, *The Early History of the Russia Company, 1553-1603*, Manch. Univ. Press (1956).

¹²² 'Reasons for a Portugall to move the trade into England', January 29, 1569, point #14, fol. 147v, British Library, *Portuguese Archives, New Series*, B. I. DOI: 10.2870/92585

al regno del Cataio).¹²³

How much spices too travelled these huge distances over the Russian steppes across into Europe is hard to ascertain; the eastern perimeter is undoubtedly the most problematic source of supply to track down through primary sources at hand, prejudiced not only by the long-standing dividing wall between western and eastern European historical scholarship, but scorned historically as a route, feared for the risk and unrest, the 'wicked and uncivilised peoples' (*populo scelerato et inculto*) and the distances along vast desolate lands paralysed for a good part of the year by ice and snow.¹²⁴ Travel in these parts of the world was associated principally with the sporadic initiatives of Frisian and Scandinavian merchants in the bleak period of post-Roman barbarianism, and conveniently ignores the pre-eminence of the Pontic routes during the *pax mongolica* between 1260-1345 and their role in propelling Russian expansion into Kazan in 1552.¹²⁵ Jeannin has estimated that the long-distance trade reached a heyday at the beginning of the eighteenth century when as much as 130 tons of silk a year were transported.¹²⁶ It might be wiser, then, to view the trans-continental central Asian caravan link with the products of China and the Indian subcontinent via the Volga and Caspian as a great but intermittent historical presence in early long-distance trade.

The route that Centurione proposed, was not taken up until a good hundred and fifty years after his death. Jeannin has alerted us to the fact that in the very numerous customs registers extant, it is very rare to discover before 1660 any reference to Asiatic or Levantine goods exported from any Baltic port.¹²⁷ And records of the English Muscovy Company trading since 1553 at Archangelsk on the shores of the White Sea - an alternative clearance route from Moscow - would suggest that such products were more prone to flow west-east

¹²³ Centurione's story is told alongside this, 'Discorso di M. Gio. Battista Ramusio sopra varii viaggi..', RAMUSIO, *Navigazioni e Viaggi*, Milan (repr. Einaudi: 1979), vol. II, 982, 984.

¹²⁴ António GALVÃO dismisses the route as 'muito mais comprido e custoso', *Tractado dos diversos e desvariados caminhos..*, Lisbon (1563), ed. Hakluyt Society (1862), 52; comments of RAMUSIO, *Navigazioni e Viaggi*., 976; see also the account of the Marshal of the King of Cyprus, sent to the Polish court in 1432, recounted by DŁUGOSZ, *Opera omnia*, ed. Przedziecki, XII, 477, and the letter of Soleiman to King Sigismund-Augustus, 8-17 August, 1565, cited by Gilles WEINSTEIN, 'Marchands Ottomans en Pologne-Lituanie et en Moscovie sous le règne de Soliman le Magnifique', 726.

¹²⁵ Michel BALARD has suggested that the Viking trading presence in Rus has recently been *mise en valeur*, but the footnote reference is lacking, 'L'impact des produits du Levant sur les économies européennes', *Prodotti e Technique d'Oltremare delle Economie Europee, secoli XIII-XVIII*, Settimana di Studio, Prato, (1997); G. STÖKL, *Russische Geschichte*, Stuttgart (1963), 237 ff.

¹²⁶ Pierre JEANNIN, 'The Sea Borne and the Overland Trade Routes to Northern Europe in the XVIth and XVIIth Centuries'; corroborate with Ralph A. AUSTEN, 'The "decline" of the central Asian caravan trade' in TRACY, *The rise of merchant empires: long distance trade in the early modern world, 1350-1750*, Cambridge University Press, (1994).

¹²⁷ P. JEANNIN, 'The Seaborne and the Overland Trade', 12, Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580 European University Institute

Map 5. East European Perimeter Trade.



Adapted from BRADY, OBERMAN & TRACY, *Handbook of European History, 1400-1600*, Leiden (1994-5), vol. I, 148.



than east-west.¹²⁸ In fact, for the period that directly interests us, we are obliged to look elsewhere, to one of the many possible basic variations that existed on this Eurasian overland route. For until at least the 1640s, routes made a southern traverse via the Black Sea, either by sea to the Crimean peninsula and up via the Via Tartarica, or to Akkermann and thence up the Moldavian road, or indeed, by land across northern Anatolia to be re-distributed from Constantinople, which Suleyman was pushing to become a leading international emporium of the spice traffic to the detriment of the Levant and Egypt.¹²⁹ These various routes congregated around a set of emporia further along the trading chain marking entry to European markets; they were principally Lwów (Lemberg), Belgrade and Buda (Ofen), which, for our period, held sway over Baltic redistribution.¹³⁰

Lwów was perhaps the most important, endowed from 1444 with absolute staple rights according to which all goods that passed through the city were obliged to be sold there. This right helped Lwów to secure a virtual monopoly of the eastern trade, at least until challenged by the royal capital of Kraków for the right for its citizens to trade *ad partes Valachiae*.¹³¹ Lwów was a major crossroads, for here the Russian road to Smolensk, and thence to Moscow, converged with the Jewish and Armenian run routes down the Via Tartarica to Tana and Soudak (Soldaia) in the Crimea. Some of this trade stopped short at Akkermann, the great Byzantine fort of Cetatea Alba (Bialogradum), conveniently situated at the head of the River Dniestr. How much did spices figure as goods traded along this route? Commercial privileges of the fifteenth century speak of the importation of Tatar wares (*res Tatares*), which we are to understand consisted of oriental and far eastern products, principally pepper, cloths and

¹²⁸ thus, in 1560 three ships were sent to Russia bearing amongst other things 363 'pieces of raisins', 'ten hogsheds and poncheons of prunes'; in 1564, 2150 lbs. of figs 'corrupt', 7 tuns of wine 'corrupt', 38 ounces 'raggad and seede pearle', 180 reams of paper, 61 yards of taffeta, 183 yards of velvet and 43 yards of crimson damask. T.S. WILLAN, *The Early History of the Russia Company, 1553-1603*, (1956), 53. For the Baltic and White Sea points of entry of 'Russian' oriental products into Europe, see Philip CURTIN, 'Overland trade from Persia through Russia' and Map 9.3 'Trade routes through Russia', in *Cross-cultural Trade in World History*, Cambridge University Press (1984).

¹²⁹ W. HEYD, *Histoire du commerce du Levant au Moyen Âge*, vol. ii, 246, from the letters of Venetian ambassadors Pietro Zeno and Tommaso Mocenigo of August 1530, in SANUDO, *Diarii*, LIII, 530 & 534.

¹³⁰ Arthur ATTMAN, *The Russian and Polish markets in international trade, 1500-1600*, (1973), 28/9.

¹³¹ Lwów's staple right is contained in *Akty Grodzkie i Zemskie z czasów Rzecz.*, IV, no. 75. The citation is from Eleonora NADEL-GOLOBIČ. 'Armenians and Jews in medieval Lvov. Their role in oriental trade, 1400-1600'. *Cahiers du monde russe et soviétique*, 20, (1979), 354. It is also dealt with by Stephen KOCZYNSKI, 'Osteuropäischer Handel im 15 Jahrhundert', *Jahrbuch für Nationalökonomie und Statistik*, XXXIV (1879), 498-500. Kraków's legal challenge is covered by P.P. PANAITESCU, 'La route commerciale de Pologne à la Mer Noire au Moyen Âge', in *Revue Historique Roumaine*, vol. III (1933), 176. Kamieniers Podolsky claimed the right to trade Moldavian goods beyond Lwów but the city's plea was rejected, *Akty Grodzkie*, VII, 69-70. DOI: 10.2870/92585

wine from Cyprus.¹³² At the same time, the early sixteenth century Polish commentator Matthew of Miechow could lament the decline of the once lively trade of the dyestuff *grana*, abundant in Russia (*abundat tota terra Russia*) and which travelled the other way, conducted by the Italians via their Crimean colonies to the great international markets in Genoa and Florence.¹³³

In many ways, the Via Tartarica was prejudiced hereafter, not only by the downfall of the Italian colonies in the 1470s, but by the increasingly antagonistic relationship between the Khans of Crimea and the Grand Princes of Moscow from the second decade of the sixteenth century. This only favoured the third trade route passing through Lwow, which was perhaps the most significant of all for the period we are interested in, another two thousand or so wagons that plied the dangerous and ill-maintained Moldavian route annually down to Constantinople.¹³⁴ According to Erazm Otwinowski, who travelled to Constantinople in 1551 from Belz, the journey took about one and a half months. But despite their length and hazards, both the Moldavian and the Tatar routes attracted great commercial interest and in the mid-sixteenth century competition raged between the Lwow Jews, those such as Jakob Thusty from western Poland and the Turkish Jewish merchants opening up the trade in southern, predominantly Cretan wines promoted by Don Joseph Nasi.¹³⁵ We even have notice of an Antwerp merchant, Martin Huriau, who set up a company in 1571 to trade with Constantinople via Poland from his native Antwerp.¹³⁶

Tommaso Alberti gives us an idea of the goods brought into Europe through Moldavia.

¹³² privileges in old ecclesiastical Slav made in 1408, 1434, 1456 and 1460 by the Moldavian princes and analysed by NISTOR, *Auswärtige Handelsbeziehungen*, pp. 24-29, and L. CHAREWICZOWA, *Handelśredniowiecznego Lwowa.*, Lwów, (1925), pp. 66-71.

¹³³ M. MIECHOWSKI, *Sarmatia asiana atque europea*, in the collection of PISTORIUS entitled *Corpus historiae polonicae*, Basel (1582), I, 141.

¹³⁴ the comments included in the report of the papal legate Francesco Commendone, 1564 in a Polish translation, Giovanni Frances COMMENDONE, *Pamiętniki o dawnej Polsce z czasów Zygmunta Augusta obejmujące listy Jana Franciszka Commendoni do Karola Borromeusza*, Wilno: Nakł. Księg. R. Rafalowicza, (1851), 2v. in I, I, 99-102; as far as cargoes are concerned, check the register of goods sent by the merchant Mehmed to Poland and Muscovy from the Ottoman Porte, *Katalog Dokumentów Tureckich : Dokumenty do dziejów Polski i krajów o ściennych w latach 1455-1672*, ed. Zygmunt Abrahamowicz, Warszawa: Państwowe Wydawn. Naukowe, (1959), 189.

¹³⁵ Salo W. BARON, *A Social and Religious History of the Jews*, rev. 2 ed. vol. XVI 'Poland-Lithuania, 1500-1600', Philadelphia (1976), 50.

¹³⁶ E. COORNAERT, *Les Français et le commerce international à Anvers*, Paris (1961), I, 187. Apparently there exists a contract of commercial partnership contingent upon a preliminary reconnaissance of the road to Constantinople by the factor Jacob von Leiden; the contract is to be found in the *Danziger Inventar*, ed. P. Simons. Munich & Leipzig (1913), no. 6014. It is, however, unlikely that this trading venture ever took off, for a little later the company seems to have traded through a factor at Venice. See W. BRULEZ, *Marchands Flamands à Venise, 1568-1605*, Brussels/Rome (1965).

In 1609, he made the journey under commission from a group of Venetian merchants who had opened an agency (*casa aperta*) in Lwow with 27 cartloads of carpets, three of rhubarb and two of silk.¹³⁷ The Turkish merchant, Hâci-Rerceb, made the journey to Poland in 1536 with precious stones and other luxury materials. Research in the archives of the Council Presidency in Istanbul and the Ottoman collection of the Polish State Archives in Warsaw has revealed movement of quantities of high value textiles of Anatolian origin, pairs of camelot embroidered with silk, Kurdish belts and *boucassin*, Bursa gauze, moccasin leather; then, on at least two occasions, large consignments up to the value of 225,000 aspres' worth of spice, including 'clove dust' (*karanfil çöpü*), pearls and chrysolites, precious furs etc.¹³⁸ But already by the 1620s, the route seems to have started to lose its importance for long distance trade, as the dynamic swang round to Danzig and the connecting river trade with southern Poland.

But for the period that interests us, the eastern trades brought in their wake a number of fairs, most famous of which, perhaps, the celebrated Lublin fairs, described by Baron von Herberstein as an assembly point for 'people from all parts of the world, Russians, Lithuanians, Tartars, Livonians, Prussians, Germans, Hungarians, Armenians, Walachians and Jews'. Amongst other goods, here were regularly to be found bales of rice, saffron, ginger and cloves (though pepper is but rarely mentioned) that had come up from Turkey with the Armenians of Kamieniec. It was not only from Lwów, but from Lublin, that spices flowed deeper into Poland.¹³⁹ Herberstein describes another fair at Chlopigrod, near Jarosław, to which Armenian and Turkish merchants came, presumably with the same goods.¹⁴⁰ These fairs might figure as the centrepiece of an estimation placing the habitual maximal westwards flow of spices entering Europe from the east within a diamond whose extremities would roughly encompass Košice, Jarosław, Lwow and Lublin.¹⁴¹

Another long-distance trade route that entered Europe from the Black Sea basin passed through Wallachia and Transylvania. The Twentieth Registers of Nagyszeben (Sibiu) and

¹³⁷ Tommaso ALBERTI, 'Viaggio a Constantinopoli. 1609-21', in Alberto BACCHI, *Scelta di Curiosità Letterarie, inedite o rare dal secolo XIII al XVII*, Bologna (1889), 17.

¹³⁸ Gilles WEINSTEIN, 'Marchands Ottomans en Pologne-Lituanie', in *Cahiers du Monde Russe*, 1994, 35(4), 724, 729-, see docs. #18 and #25.

¹³⁹ H. SAMSONOWICZ, 'Handel Lublina na przełomie XV i XVI wieku', *Przegląd Historyczny*, vol. 59, no. 4, Warszawa (1969), 622.

¹⁴⁰ Baron Sigismund von HERBERSTEIN in *Notes upon Russia: Rerum Moscoviticarum Commentarii, 1517-26*, ed. by R.H. Major, (1852), vol. II, 145 and on Chlopigrod, pp. LXVII ff.

¹⁴¹ F.W. CARTER prefers a demarcation line through Krakow-Lublin-Breść, *Trade and urban development in Poland* (1994), 196. Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580

Brassó (Braşov) for the years 1500 and 1503 register Wallachian merchants as the primary actors of this trade, which being passed on to Saxon merchants and then others, can be traced as far as Nagyvárad (Oradea), and from there to Kassa (Kaschau, Košice) and, albeit it with smaller quantities of spices, to Buda (Ofen).¹⁴² The Kassa Trading Company distributed Upper Hungarian regions with these and other articles, but also exchanged their oriental products at Cracow for woollen cloth.¹⁴³

How much further into the European market did these goods percolate? We have the remarkable testimony of a Catalan map of 1375 on which is marked: 'To the city of Lion (*ciutat de Leo*) arrive various merchants from the Levant who continue later across the German Sea to Flanders'. Was this a norm? Stefan Kutrzeba, who has investigated the trading activities of the Order of the Mother of God (*Zakoń najświętejszej Mariji Panny*), suggests that after 1350 spices were sent along the land route as far as Bruges; Gerald Strauss finds spices reaching German markets at Nuremberg via Krakow and Silesia, and hints that they travelled further along the route to Flanders.¹⁴⁴

Displacement to this degree cannot really be upheld for the sixteenth century, though spices are known to have circulated via the German trading ventures operative in Poland and Moldavia, via the Jewish merchants of western Poland, Greek merchants such as A. Halkokondil, referred to in numerous letters of the Archiwum Główne Akt Dawnych in Warsaw or, as we learn from an Ottoman document of 1550 and the *Kronika Polska*, via Armenian trademen and intermediaries.¹⁴⁵ Gilles Weinstein has unearthed the sporadic movements of Ottoman court merchants to Lwow, often continuing as far as Moscow.¹⁴⁶ We can establish that there was a regular flow of spices via Sandomierz at least as far as

¹⁴² Z.P. PACH, 'La route du poivre vers la Hongrie médiévale. Contribution à l'histoire du commerce méditerranéen au XVe siècle', *Mélanges en l'honneur de Fernand Braudel*, Toulouse (1973), II, 449-458.

¹⁴³ from the registers of the Kassa Merchant Company 1502-03, G. KERÉKES, 'A kassai kereskedelmi társaság főljegyzései 1502 és 1503', *Magyar Gazdaságtörténelmi Szemle*, (1902), 106-117.

¹⁴⁴ S. KUTRZEBA, *Handel Polski ze Wschodem w wiekach średnich*, Kraków (1902), 28-29; G. STRAUSS, *Nuremberg in the sixteenth century*, Bloomington/London (1976), 128.

¹⁴⁵ A.G.A.D., Archiwum Koronne, *Dział Turecki*, vol. 36, no. 80; document of 1550 cited by P.P. PANAITESCU, 'La route commerciale de Pologne à la Mer Noire au Moyen Âge', 178 and *Kronika Polska*, vol. II, Sanok (1856), 961.

¹⁴⁶ Gilles WEINSTEIN, 'Marchands Ottomans en Pologne-Lituanie et en Moscovie sous le règne de Soliman le Magnifique', in *Cahiers du Monde Russe*, 1994, 35 (4), 713-38; Turkish merchants came to Poland in 1534 with merchandise from the Levant, and from there to Krakow and the European spice trade, 448-450.

Cracow.¹⁴⁷ Koczy claims that spices arriving in Poznań from Lwów in the first half of the sixteenth century were twice as cheap as those sent on from Lisbon; other sources confirm that Henryk Bocian travelled a number of times in the early 1520s to Lwów for spices on the account of his neighbour Piotr Świdra, who ran one of the Poznań pharmacies.¹⁴⁸

In any case, the old contention that the Ottoman frontier closed to international traffic with the string of Turkish territorial advances from the second half of the fifteenth century can't really be sustained. Treaties of free trade were signed between Poland and the Porte in 1490 and 1494, and the Turkish scholar, H. Inalcik, has produced strong empirical counter-evidence in terms of commercial movement from work on Turkish customs registers at Kaffa.¹⁴⁹ Indeed, further research on Turkish customs journals for the city of Buda between 1550-1574 reveals that quantities of 550 metric quintals of pepper were transported from Constantinople via Belgrade. This is a significantly larger quantity than had been accustomed to reach the city a hundred years earlier. Other sources, the journals of the customs' offices of Nagyszeben and Brassó for the years 1500 and 1503 respectively, would suggest that this flow was more than intermittent; spices, of which pepper was the predominant (825 hwt. or between 463-68 metric quintals), figure not as a passing trifle, but as the most valuable single import.¹⁵⁰ At 825 quintals, or 36,200 florins, this is five times the quantity of pepper imports passing through the western Hungarian border town of Pozsony fifty years earlier.¹⁵¹

Sceptics maintain that the quantities entering Europe via Lwow or Transylvania, whether before or after the Turkish expansion, were significantly smaller than those pumped

¹⁴⁷ S. KUTRZEBA, 'Dzieje handlu i kupiectwa krakowskiego', in *Rocznik Krakowski*, XIV, (1910), 8 and IDEM. *Handel Krakowa w wiekach srednich*, Cracow (1902), pp. 12-14, 109-113. In 1536, for example, a Turkish merchant named Said visited Cracow with merchandise including spices, *Biblioteka Czartoryskich w Krakowie*, vol. IV, no. 611, 125.

¹⁴⁸ L. KOCZY, *Handel Poznania do połowy XVI wieku*, Poznań (1930), 48; Witold MAISEL, *Jan Bocian, nieznaný żeglarz poznański*, (1954), 213.

¹⁴⁹ The traditional nineteenth century assumption that the fall of Constantinople and the advance of the Ottoman Empire arrested oriental trade with Europe is present in classic works such as L. CHAREWICZOWA, *Handel średniowiecznego Lwowa*, Lvov (1925), 87. See her communication published in the *Actes du Ier Congrès International des Etudes Balkaniques et Sud-Est Européennes*, III, Sofia (1969), 87 & 63. The Turko-Polish free trade treaties are discussed by Stefan KUTRZEBA, *Handel Polski ze Wschodem w wiekach średnich*, Kraków (1903), 125-6.

¹⁵⁰ Z. PACH, 'The Transylvanian Route of Levantine Trade around 1500', *Studia Historica*, Budapest (1975), 59 citing *Quellen der Geschichte Siebenbürgens aus sächsischen Archiven*, I. Rechnungen aus dem Archiv der Stadt Hermannstadt und der sächsischen Nation, I, Hermannstadt (1880), 270-307; *Quellen zur Geschichte der Stadt Kronstadt in Siebenbürgen*, I, Rechnungen aus dem Archiv der Stadt Kronstadt, I, Kronstadt (1886), 1-81. Note that Pach considers a metric quintal equivalent to 100 kilograms, whereas they are more conventionally rounded down to 50 kilos.

¹⁵¹ PACH, 'The Transylvanian Route of Levantine Trade around 1500', *Studia Historica*, Budapest (1975), 59. Haikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580

into eastern Europe via Venice and Nuremberg.¹⁵² The 825 quintals flowing through the customs offices in what was then eastern Hungary only represent between 5.8-7.3% of the quantities shipped into Venice. It is these differences in volume of trade that can perhaps explain the sizeable price variances of the same goods noted by Koczy at Poznań and at Kolozsvár in 1595 where, for example, saffron brought from Vienna (*Bechj saphran*) was sold for 10-12 florins a pound next to saffron brought up from Turkey (*Törk száfrán*) for around 6 florins a pound.¹⁵³ A recent study of extant Polish customs books from 1538-9 by F.W. Carter has suggested specifically that the dominant route taken by colonial goods arriving in Poland at that time passed through Vienna and originated in Venice, whilst those of 1584 suggest Gdańsk as the principal supplier, though also other Baltic ports such as Hamburg and Szczecin, and which sent on via Wrocław.¹⁵⁴

There are a number of things to say as regards Carter's findings. If the singularity of the information from 1538-9 is set against trends over longer periods of time, then one might find, as Heinrich Wendt pointed out, that overall Krakow's commercial relations with Venice be characterised as 'temporary and of restricted scope' (*zeitweilig und in beschränkten Umfange*).¹⁵⁵ Furthermore, I would suspect that a sizeable part of the spices exported from Venice were not those six *épices classiques*, which we have sought to prioritise in this thesis; they were southern fruits, figs and raisins from the Levant, but also olives and even latterly Parmesan cheese.¹⁵⁶ This was, however, also true of the kind of products being imported across the eastern perimeter by the second half of the sixteenth century, ever less the traditional spices and ever more the so-called *res turcales*. As regards the traditional spices, I would like to emphasise the presence of spices flowing east across the European landmass

¹⁵² M. MAŁOWIST, 'Le commerce du Levant avec l'Europe de l'Est au XVIe siècle', in *Mélanges en l'honneur de Fernand Braudel*, 2 vol., Toulouse (1973), 350, with further references to IDEM. 'Les routes du commerce et les marchandises du Levant dans la vie de la Pologne au bas Moyen Age et au début de l'époque moderne', in *Atti del VI Colloquio Internazionale di Storia Marittima*, Firenze (1972) and J. PTASNIK, *Italia mercatoria apud Polonos saeculo XV ineunte*, Rome (1910).

¹⁵³ Kolozsvár, KvSzám 6/XV-XVI. 318.

¹⁵⁴ CARTER, *Trade and urban development in Poland*, 198. Are these national customs' books? See also H. KELLENBENZ, 'Der Pfeffermarkt um 1600 und die Hansestädte', *Hansische Geschichtsblätter*, vol. 74, Lübeck (1956), and M. BOGUČKA, 'Handel Gdańska z Półwyspem Iberyjskim w pierwszej połowie XVII wieku', *Przegląd Historyczny*, (1969).

¹⁵⁵ WENDT, 32 cited by F. LÜTGE, 'Der Handel Nürnbergs nach dem Osten im 15/16 Jahrhundert', in *Beiträge zur Wirtschaftsgeschichte Nürnbergs*, Bd. 1, (1967), 345.

¹⁵⁶ D. QUIRINI-POPLAWSKA, 'Die italienische Einwanderer in Krakau und ihr Einfluss auf die polnischen Wirtschaftsbeziehungen zu österreichischen und deutschen Städten im 16 Jahrhundert', *Wissenschaftliche Zeitschrift der Friedrich Schiller Universität Jena* (1977), 337-354.

from Antwerp, and passing via Wrocław or Leipzig as far as Krakow, even if the Silesian border was on occasion closed to traffic for political reasons.¹⁵⁷ Then, the 1584 records help bring forward our understanding of the beginnings of Baltic lines of redistribution, which concords with the retraction of the Turkish Jews - displaced Marranos sometimes known as *Portugiesen* - from the trade, and the unrest which rocked the region particularly violently in the 1590s with widespread raiding and the dissolution of the 'permanent peace' between the Porte and the Polish-Lithuanian Commonwealth.¹⁵⁸ It was the trade from the north, ultimately, that drew the merchants from upper Hungary, especially the Slovakian towns of Košice and, in the first half of the seventeenth century, Levoča, as well as a host of eastern and southern Moravian towns such as Opava, Krnov, Těšín, Jablunkov, Ostrava, Frýdek, Příbor, Olomouc and Uherský Brod and, in 1593, even Prague came to Krakow for spices.¹⁵⁹

In conclusion, I would urge an extremely open opinion on the flows of oriental products in southern Poland in this period, an area of free interplay between the four routes of import - from the north, south, east and west. As we have seen from the case of Koložsvár, it could easily be that spices from two different commercial systems and at very different prices nestled alongside each other on the same market. Sometimes, as in the case of spices traded by the Kassa company, or the export of Cracovian spices to towns in Slovakia like Bardejov, or even as far as the wine-producing regions of Tokaj on the south-facing slopes of the Zemplén, the flows crossed each other in contraflow.¹⁶⁰ In any case, the picture is more complicated than the simple line of coinciding prices running between Breslau, Lublin

¹⁵⁷ R. RYBARSKI, *Handel i polityka handlowa Polski w XVI wieku*, vol. 2, Poznań (1929), pp. 185-7, 202-3; J. MALECKI, 'Handel zewnętrzny Krakowa w XVI wieku', *Zeszyty Naukowe Wyższej Szkoły Ekonomicznej w Krakowie*, no. 11, Kraków (1960), 104-5.

¹⁵⁸ Z. ŚWITALSKI, 'The Reasons for the Withdrawal of the Turkish Jews, Refugees from Spain, from the Levant Trade of the Polish Commonwealth in the Last Years of the Sixteenth Century', *Biuletyn of the Żydowski Instytut Historyczny*, Warsaw, no. 37, 59-65. J.M. MALECKI, 'Die Wandlungen im Krakauer und polnischen Handel zur Zeit der Türkenkriege im 16. und 17. Jahrhundert', in *Die Wirtschaftlichen Auswirkungen der Türkenkriege. Die Vorträge des 1. Internationalen Kongress zur Wirtschaft- und Sozialgeschichte*, 5-10 Oktober 1970, ed. O. Pickl.

¹⁵⁹ F. HEJL, 'Český obchod na Krakowském trhu po Bilé Hoře', *Sbornik Prace Filosofické Fakulty Brněnské University*; for Prague, see the Wojewódzkie Archiwum Państwowe w Krakowie, Księgi celne, rkp. 2116 (1593), fol. 25, 82 as cited by F.W. CARTER, *Trade and urban development in Poland*, 198.

¹⁶⁰ L. DEÁK, 'Bardejovský obchod a Bardejovska obchodna cesta v prve polovici 15 storičia', *Historica: Sbornik Filozofickej Fakulty University Komenského*, vol. XIV, Bratislava (1963), 120-1. A Krakow merchant, Nikelklen, is recorded transporting pepper and saffron totalling 28 cetnars (1.81 tons) to Bardejov, document no. 507 in B. IVÁNYI, *Bártfa szabad királyi város levéltára*, vol. I (1319-1501), Budapest (1886). Judit PÁKH, *Észak-Magyarország, postakereskedelem a XVI. század végén*, *Történeti Statisztikai Közlemények*, (1978).

and Brest, and which, in Kieniewicz's opinion, cut a swathe between the spices of North Sea provenance and those that had percolated up from south-eastern Europe.¹⁶¹ Only with time did two of the overland routes drop off, that from Antwerp and the tortuous Eurasian route from the east. The remnants of the Hanse, newly partnered with the VOC, imported via Danzig, while the creation of the Wiener Orientalische Handelskompagnie in the mid-seventeenth century ensured that some spices continued to arrive from Vienna.¹⁶²

12.6. Efforts to import substitute and policies of transportation.

In the context of competition for Portuguese overseas trade routes, one historical issue remains of particular interest. Why was it not the case that once the circumstances under which oriental spices were cultivated became widely known with direct contact with the East, these same products were import substituted, transplanted to European soils or suitable colonial territories closer to the hordes of European consumers? Such a project would have got rid of the hazards of a long sea voyage and helped competitors circumvent the Portuguese monopoly; in the hands of the Portuguese, import substitution would have served as a safeguard to one of her chief assets, the spice trade, by displacing it to more secure colonial territories with a suitable climate, most immediately Brasil, once the Portuguese Estado da India was rapidly falling prey to the Dutch and when the cost benefits of greater proximity and free supply of slave labour, one would have thought, might have offered the Portuguese a precious competitive advantage at a time when the fight for the European market was really hotting up.

There are a number of issues involved. It was unclear, and had been for a long time, whether oriental spices could be persuaded to grow commercially in Europe. J. Donald Hughes has collected a list of species of plants and trees growing in 'paradises' (parks and hunting enclosures modelled after Persian shahs and satraps) from ancient sources, and it can thus be demonstrated that balsam, date palms, incense trees, nard, myrabolan and henna were

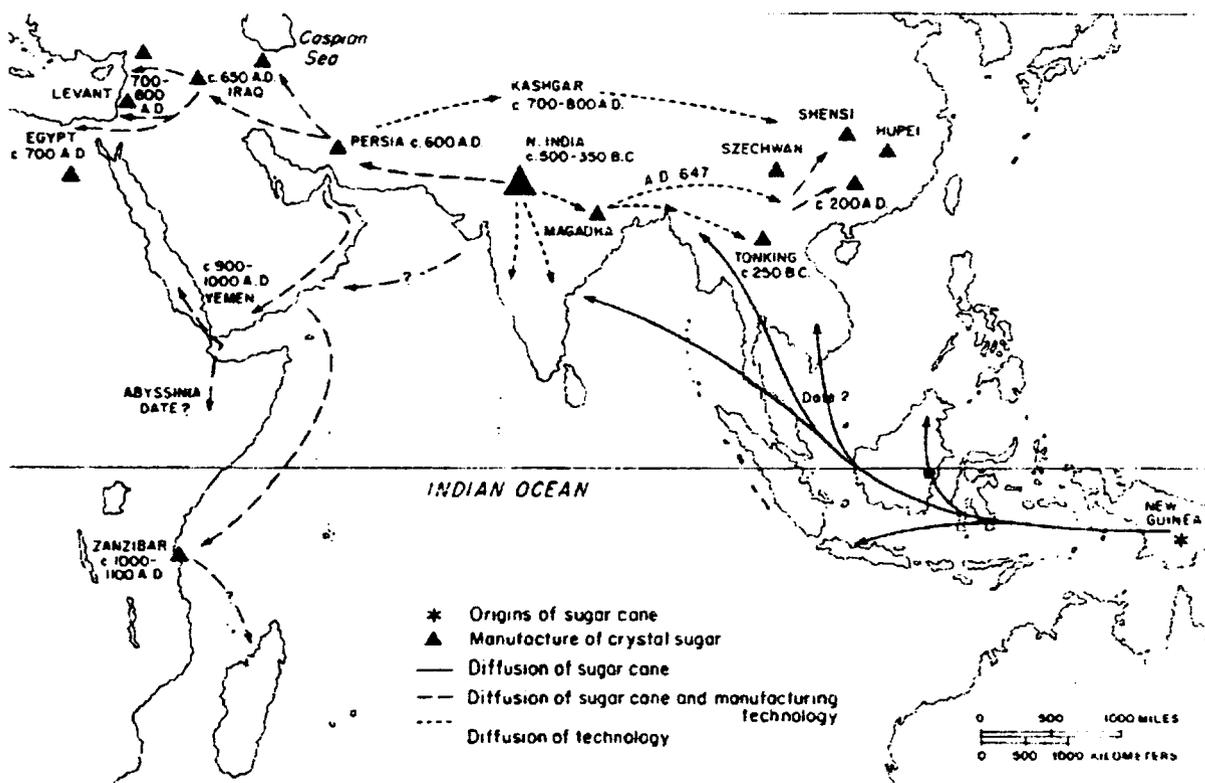
¹⁶¹ Jan KIENIEWICZ, 'Nouvelles et Marchandises: La Perspective Polonaise des Découvertes Portugaises au XVI^e siècle', in *Actes du Colloque 'La Découverte, le Portugal et l'Europe'*, Centre Culturel Portugais, Paris (1990), 333.

¹⁶² Z. PACH, *communication in Sviluppo e Sottosviluppo in Europa e Fuori d'Europa dal secolo XIII alla rivoluzione industriale, Atti delle 'Settimane di Studio' ed altri Convegni*, no. 10, Istituto Internazionale di Storia Economica 'F. Datini', Prato, Le Monnier (1982), 508.

Capsule D: Import Substitution.

It is not always clear which travelled more effectively, plants or men.¹ Sometimes plants stubbornly resisted change, as was the case with the pepper moved to Africa and Brasil by the Portuguese in the seventeenth century (see §10.6). On other occasions, they seem to have moved almost of their own accord.

Sugar, as we can see below, had long been on the move, adapting itself variably from tropical rain forest ecosystems to those of the semi-desert. The Portuguese played a further role in this transference, offering sugar passage from Sicily across Madeira to the New World. The sixteenth century Madeiran chronicler Gaspar Frutuoso describes how the initiative was Dom Henrique's (1394-1460); it was he who 'sent for sugar-cane from Sicily to plant on the island, given its fame for rivers and water; and he had experts knowledgeable in the cultivation of sugar come to see if they would take; and the plant multiplied in such like that Madeira's sugar is considered the best in the world'.²



Source: 'The ancient Oriental sugar industry, c. 500 B.C. to A.D. 1100', in J.H. GALLOWAY, *The sugar cane industry. An historical geography from its origins to 1914*, Cambridge University Press (1989), 26.

¹ see Henry HOBHOUSE, *Seeds of change: five plants that transformed mankind*, London, (1992).

² 'mandou a Cecilia buscar cannas de assucar para se plantarem na ilha, pela fama que tinha das muitas ribeiras e aguas que nelle havia; e com ellas mandou vir mestres para temperamento de assucar, se as cannas nella se dessem; e esta planta se multiplicou de maneira na terra, que é o assucar d'ella o melhor que agora se sabe no mundo' (*Saudades da Terra: história das ilhas do Porto-Sancto, Madeira, Desertas e Selvagens*, ed. A.R. de Azevedo, Funchal: Typ. Funchalense, (1873), chap. XII).

all at some distant time in the past proliferating in Europe.¹⁶³ But it is unclear whether they had disappeared as a result of climatic change or neglect. Admittedly, there were limits to the what could be transplanted. Pliny, summarising books XII and XIII of the fourth volume of his *Historia Naturalis*, claimed that he was dealing ‘mostly with foreign trees that cannot be trained to grow elsewhere than in their place of origin, and that refuse to be naturalised in strange countries’. Legend has it that, before leaving, Da Gama dared ask the Zamorin of Calicut whether he could take a cutting of the pepper plant with him; the sarcastic answer is said to have been that he could take the pepper, but that the rains could not be moved.

Ramusio, on the other hand, is not convinced that the spices of the east could not be transplanted, citing the lemon and orange trees and cedars transplanted from Persia and the Middle East by the Romans and which, in Ramusio’s day, covered Italy ‘in great forests’ (*di boschi grandissimi*). This indeed leads him to raise the issue seriously:

that it would not be unreasonable to suggest that the same could be carried out with the said spices as has happened with so many others [i.e. plants], that some great prince in the current circumstances has carried them to some new country or region, not altering significantly the latitude to which they are naturally adapted, something not impossible to he who considers cases from the past; with ginger, for example, one might do what one likes, for it will grow in any of the large islands of our Mediterranean, and one can easily see the proof by sending someone via Cairo to pick fresh roots at Suez, where they are planted every year. ¹⁶⁴

Timothy Bright concurs, confident that if:

The Dittanie of Candie, the Cipres tree, the Nicotian out of India.. will brooke our soyle, and flourish therein, as they doe, wee neede not doubt, but certaine and sufficient prouision of all medicines.. might be made partly a voluntarie yeelde of the same, partly by planting, and sowing, with iust temper of the moulde, and situation of the plant, out of our owne countrie.¹⁶⁵

¹⁶³ J. Donald HUGHES, Table 2, ‘Europe as Consumer of Exotic Biodiversity: Greek and Roman Times’, paper circulated at *The Native, Naturalized and Exotic: Plants and Animals in European History*, an environmental history workshop organised at the HEC Department and the IUFRO-Forest History Group, 20-21 April 2001, Istituto Universitario Europeo, Fiesole, Italy.

¹⁶⁴ ‘che non saria fuor di proposito affermare che l medesimo potria intravenire alle dette spezie che è intravenuto e tante altre cose, che qualche gran principe per novi accidenti le facesse mutar paesi e regioni, non alterando in la maggiore parte di quelle li loro grado naturali delle latitudini, cosa non impossibile a chi vorrà considerar molto bene quello che elle hanno fatto nei tempi passati; ma che del gengevo si potria far ciò che si volesse, che nascera in tutte l’isole grandi del nostro mar Mediterraneo, e che facilmente se ne potia veder la prova mandando per la via del Cairo a pigliame le radici fresche al Suez, dove ne piantano ogni anno’, RAMUSIO, *Navigazioni e Viaggi*. ., Milan: Einaudi, (1978-88), vol. I, 989-.

¹⁶⁵ BRIGHT, *A Treatise, wherein is declared the sufficiency of English medicines for cure of all diseases, cured with medicine*, (1580), 46-47.
 Haikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
 European University Institute

Other spices successfully migrated to Europe. The chilli pepper (*Capsicum frutescens*), first described to us in the writings of Peter Martyr, was brought to Spain by Columbus and was actively cultivated from around 1495. It was known in England in 1548, in southern France from around the same time, and central Europe from 1585, though that it arrived in Hungary from the West can only be doubted on etymological grounds, for prior to becoming popularised as paprika from around 1775, the chilli pepper was known as *törökbors*, or Turkish pepper.¹⁶⁶ Similarly, brown mustard (*Brassica juncea*), indigenous to north eastern India with secondary types in China and Burma, was brought to Europe some time at the beginning of the sixteenth century to supplement the European black (*Brassica nigra*) and white (*B. alba*) species.¹⁶⁷ Liquorice and tobacco were both planted in England during the sixteenth century.¹⁶⁸ Perhaps the most successfully import substituted spice was saffron (*Crocus sativus*), which spread throughout Europe, from Hungary to southern Italy to England, and which if still favoured from the Orient throughout the Middle Ages, eventually became a product of European export, and was sent with consignments of various other goods to Malabar.¹⁶⁹

Now, we have seen (§ 10.4) how the Portuguese tried to restrict the cultivation of spices to their indigenous habitats in the East. Growing them elsewhere, if cost reducing, would only have subverted one of the mainstays of the Portuguese presence in the East, as we have shown. Thus it was that the Portuguese forbade the transportation and cultivation and actively destroyed any evidence of transplantation of the traditional East Indies' spices.

The situation only started to be reversed following the Restoration of the Portuguese monarchy when remaining territories there were few, and by Dom Pedro II (1683-1706) more precisely. He had been lobbied by António Vieira and Duarte Ribeiro de Macedo, the Portuguese ambassador in Paris between 1668-77, who had gone so far as to advise the King as how to package the seedlings.¹⁷⁰ It is these men to whom we must accredit the project

¹⁶⁶ József CSAPÓ, *Új füves és virágos magyar* (1775).

¹⁶⁷ Mário SANTOS, 'Migrações das espécies hortícolas', in *Actas do Congresso Internacional de História das Descobrimentos*, vol. IV, Lisbon (1963).

¹⁶⁸ *The Annales of England. unto 1614*, London (1615), continued by Edmund Howes, 866 ff.; Joan THIRSK, 'New Crops and Their Diffusion: Tobacco-growing in Seventeenth-Century England', in *Rural Change and Urban Growth*, ed. C.W. CHALKLIN & M.A. HAVINDEN, London (1974).

¹⁶⁹ W. HEYD, *Die Geschichte des Levantehandels im Mittelalter*, Stuttgart (1879), II, 645-6; K.S. MATHEW, *Portuguese Trade with India in the Sixteenth Century*, (1983), 137.

¹⁷⁰ Duarte RIBEIRO DE MACEDO, *Observação sobre a transplantação dos frutos da India ao Brasil*, Paris (1675). European University Institute

of constructing 'a new spice pole in Brasil' (*um novo pólo de especiarias no Brasil*). A number of spices, such as *cassia lignea*, canafistula and indigo, were already known to grow wild there.¹⁷¹ Documentation in the Livros das Monções otherwise gives us an idea of the care and the planning that went behind this project undertaken on a large scale and in the utmost secrecy. All the major spices were displaced, including cinnamon, cloves, pepper, nutmeg and ginger. Expert botanists were employed from both Portugal and, like the Franciscan friar João da Assunção, from Goa; from 1677, both seeds and living specimens were dispatched to Brasil, but also to Angola and S. Tomé. The project met with mixed success, despite the mobilisation of the highest level of regional political government and royal orders designed to ensure that cultivation be conducted in areas with differing soil conditions and climates. Ginger, which had already made its way to S. Tomé one hundred years earlier like brazil wood if not clear how, was reported to have spread like wildfire (*deu copiosamente*), whereas pepper had difficulty surviving the long sea voyage.¹⁷² It would have been worth persisting. Brasil is today one of the world's principal producers of pepper.

It seems part of the problem were the incentives, for planters were more persuaded of other well tried cash crops of which there was a greater and more buoyant demand, like sugar, coffee, tobacco and cotton. São Tomé was the target of another project commenced forty years later and that sought, under the instigation of Frei Manuel de S. João Baptista of the S. Agostinho order, to establish a cinnamon plantation on the island from specimens growing in the Coimbra gardens.¹⁷³ We do not know of the upshot.

Nor were Portugal's competitors particularly quick to seize the opportunity of import substituting. The English managed to transplant nutmeg seedlings to Malaya and Ceylon from their tiny island possession of Run in the Banda archipelago before it was handed over to the Dutch by the Treaty of Breda in 1667; otherwise, the Dutch monopoly on the production of traditional spices in the East Indies was only significantly breached in 1770 when Pierre

¹⁷¹ Tomé PIRES, *The Suma Oriental*, ed. Armando Cortesão, Hakluyt Society, London (1944), 517; Marcondes de SOUZA, *Amérigo Vespucci e suas viagens*, São Paulo (1949), 270.

¹⁷² José Roberto do AMARAL LAPA, *O Brasil e as drogas do Oriente*, Marília: Faculdade da filosofia, Ciências e letras, (1966); J.E. MENDES FERRÃO, *Especiarias: cultura, tecnologia, comércio* (1993), 31-. By the time of the *Relatione del Reame di Congo* around 1578, ginger was accepted as an established feature of the islands' natural wealth, liv. 1, cap. 1. Note that the Portuguese are accredited with the spread of ginger to Hispaniola, Antonio de HERRERA, *Histoire generale des voyages et conquêtes des Castellans dans les Isles et terre ferme des Indes occidentales*, Paris, III. 46.

¹⁷³ SOUSA VITERBO, 'Breve noticia sobre a cultura da canela na Ilha de S. Thomé', in *Trabalhos da Academia de Ciencias de Portugal. (1908-20)*, vol. I. The original documents regarding this project are kept in the Biblioteca Nacional, Arquivo do Conselho Ultramarino, L. 14 de Officinas, fl. 182.

Poivre, the French governor of Mauritius, smuggled out clove and nutmeg seedlings.¹⁷⁴ Poivre may well have benefited from the lively ongoing debate amongst natural scientists as to the best techniques available for preparing organic specimens for long sea voyages.¹⁷⁵ From Mauritius the clove was taken to Zanzibar by Haramel bin Saleh in 1818. Zanzibar and neighbouring Pemba on the east African coast subsequently became the world's main suppliers of cloves, a position which holds true to this day. Spice seedlings were once again displaced from the Indonesian archipelago at the time of British occupation in the nineteenth century whence they were taken both to India and to Europe. These ventures finally fulfilled the long entertained objective of supplying these rare spices to domestic national markets behind the back of the official monopolist, but a number of centuries after they could have had an impact on the Portuguese trade, and the fortunes of the Feitoria de Flandres in particular.

¹⁷⁴ Giles MILTON, *Nathaniel's Nutmeg*, Hodder; M. LY-TIO-FANE, *Mauritius and the spice trade*, 2 vols, Port Louis (1958) and Paris (1970).

¹⁷⁵ see, for example, TURGOT & FRANÇOIS, *Mémoire Instructif sur la Manière de Rassembler, de Préparer, de Conserver et d'Envoyer les Diverses Curiosités d'Histoire Naturelle; Auquel on a Joint un Mémoire Intitulé: Avis pour le Transport par Mer des Arbres, des Plantes Vivaces, des Semences et de Diverses autres Curiosités d'Histoire Naturelle*, Paris-Lyon: Jean Marie Bruyset, (1758) and John Cookley LETTSON, *Le Voyageur Naturaliste ou Introduction sur les Moyens de Ramasser les Objets d'Histoire Naturelle et de les bien Conserver* [...] *Traduit de l'Anglois sur la Seconde Édition Corrigée et Augmentée auquel on a joint l'Art de Calmer les Flux de la Mer. Ouvrage aussi traduit de l'Anglois*, Amsterdam-Paris: Cacombe (1775).

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13. CONCLUSION.

13.1. Epilogue, or assessing the significance of the closure of the Crown Feitoria from what followed.

If we cast an eye to what followed the closure of the crown *feitoria*, we find that the flows of trade changed little, if the forms by which that trade was structured continued to fluctuate violently. Even after the Netherlands had established their own links with the spice producing regions of the Far East, and political unrest had wreaked havoc with Iberian shipping on the Atlantic run up to northern Europe, Flanders remained the chief redistributive destination of Portuguese colonial goods. An English state memorandum of 1569 urging pressure to be brought on the Portuguese trading community in Antwerp to displace their spice staple to English shores evidently foundered.¹ As late as 1618, Duarte Gomes Solis could report that ‘the merchants that buy [spices] in Portugal do so in order to send them to Flanders where the greater part of Your Highness’ trade of the Indies is sold, in addition to that transported by the rebels’ (*los mercaderes que la compran en Portugal es para efecto de embiarla a Flandres donde como mantenimiento se gasta la mayor parte de toda la que V. Mgde. viene de la India, demas de la que los rebeldes traen*).²

The interplay between the forms of trade - open trade, contract trade and monarchical capitalism - however, only continued to repeat itself without any firm conclusion. It would be too presumptuous to herald the collapse of monarchical capitalism with the fall of the Feitoria in 1549, as Nunes Dias does, for the Crown continued to mastermind the *Carreira das Índias* and we find it on several occasions trading on its own account: three *naus com pimenta de el-rei* are recorded during the term of the Rovellasco contract signed on 29 November 1585; then, in 1597 the Crown took the trade for a number of oriental spices back under direct royal administration, as it had malagueta in 1590, albeit with some exemptions; it did so once again on 1 January 1615; and even in the mid-1770s, a French report observed how the imperial trades with India, Africa and Brazil were carried out ‘by the fleets of the King’

¹ ‘Whether it be proffittable for the Commonwealth of England that the Staple of Spices for those parts of the world be kept in England, and how it may be brought to passe’, 29 January, 1569, *B.L. Cottoniana*, codice Nero, B. I, Fol. 146-.

² Duarte GOMES SOLIS, *Alegacion en favor de la Companhia de la India Oriental, commercios ultramarinos, que ne nuevo se instituyó en el Reyno de Portugal*, (1628) as cited by V. MAGALHÃES GODINHO, *Os Descobrimentos e a Economia Mundial*, (Lisboa, 1980), pp. 1480-1580.

(*par les flottes du roi*).³

As far as the Crown's declaration that no further contracts were to be made, and that trade from 29 November 1549 was to be on an open basis from the Casa da Índia, doubts regarding the practicability of such were immediately cast from all quarters. While those close to the King speculated that some kind of agreement might be concluded with the Venetians to serve as distributors, the correspondance between Charles V and his ambassador Lope Hurtado de Mendonça suggests that the Emperor doubted that Antwerp's primacy could be overthrown for Lisbon, and applies much the same logic as we have used to explain why D. Manuel's schemes to make Lisbon the node of the spice trade at the beginning of the century foundered, starting from the historical observation that 'according to its course, the spice trade has kept and keeps to these parts and to no other' (*segund el curso há tenido y tiene la dicha speceria en estas partes en otra ninguna*).⁴ In any case, the Portuguese Crown's resolution proved unsustainable, for as we have seen in Chapter 6 the Affaitati (Antwerp, Spanish and Portuguese branches) successfully bid for the re-export trade in concert with the Pinelli and Spinola of Genoa as early as 1551, and Armando Castro suggests that in 1553 the Portuguese Crown was obliged to lease a five-year contract on the Indies route as a result of financial difficulties.⁵

It is true that the '50s were a decade of great financial precariousness for the Portuguese Crown, particularly in the wake of the Spanish financial crisis of 1557, which culminated in the declared bankruptcy of the Casa da India in 1560 and the cessation of payments to creditors.⁶ At least this patently demonstrated that the dimensions of the financial problems afflicting the Portuguese Crown way surpassed the debt-ridden crown *feitoria*, and could not be simply resolved by closing the institution down. At any rate, it was due to these financial circumstances that contractual trade, and which offered liquid payment

³ NUNES DIAS, 'A Coroa, com isso [the closure of the Feitoria], confessava sua impotência para monter o monopólio estatal', *O Capitalismo Monárquico Português*, 364; for the instances of royal re-assumption of the monopoly of trade, I have started from Armando Castro's Quadro no. 4, 'Alguns casos significativos do capital comercial e financeiro estrangeiro no sistema ultramarino português, em particular quanto ao tráfego do Oriente', *História Económica de Portugal*, 170-178; *Etat Présent du Royaume de Portugal en L'Année MDCCLXVI* (Lausanne, 1775), 224. Cf. S. SUBRAHMANYAM, *The Portuguese Empire in Asia, 1500-1700*. (1993), 'It took Spanish rule in Portugal, in the period after 1580, to bring about a decisive shift in the attitude towards royal trade', 88.

⁴ letter from Carlos V to Lope Hurtado, dated 16 November 1549, Brussels, A.G.S. Estado, Legajo 374, doc. 117.

⁵ A. CASTRO, *História Económica de Portugal*, vol. III, 175.

⁶ In Ehrenberg's opinion, largely reliant on Guicciardini, the crisis "shook the finance and trade of Europe to its foundations", *Capital and Finance in the Age of the Renaissance*, 114 & 252; A. CASTRO, *História Económica de Portugal*, III, 196.

in advance and often favourable terms on accompanying loans, is so understandable from the Crown's point of view; indeed places strain on our understanding of the motivations underlying the declaration of 'open trade' as recently as 1549.

But it was precisely such terms that men like Damião de Góis had urged the Crown to avoid. He had seen such terms in very much the same light as *dependencista* economists currently view multinational investment bids to countries of the developing world, opportunities for these companies to 'hold Your Highness to ransom by making Your Highness owe abroad what Your Highness previously owed, and from which the whole of Europe has been made rich' (*tomarem Vossa Alteza entre talas, e o fazerem dever fora destes reinos, o que dantes devia, por que desta parte se tem toda a Europa feita rica*). The solution he urged was to 'order that the Casa da Índia be opened up and sell for cash, and not to lose such an occasion, because in this way the Kingdom will be made bountiful, rich and abundant in all 'nations' [meaning trading communities] and merchandise of the world' (*mandar abrir a Casa (da Índia), vender de contado, e não perca tamanha ocasião, porque deste modo o Reino será farto, rico e abandoso de todallas Nações, e mercadorias do Mundo*).⁷

Góis's influence on the King was decisive. Just as his reproaches to the King as to the state of crown finances had led to the closure of the crown *feitoria*, so did his convictions as regards open trade persuade the King to cease trading 'on his own account' (*per sua conta*) and abstain from trade through 'pre-arranged contracts' (*contratos çarrados*).⁸ There is perhaps only one dimension in the timing of these decisions that is missing. If the element of supporting his subjects (*largar aos meus vassallos*) was an important one, it was reciprocally conditioned by the King's desire to throw off the reliance ('dependence') hereunto on foreign contractors, ever more tinged - most importantly - with the polluted blood of the Marranos. Here the timing with the Emperor of Spain's revocation of the franchises extending to Jews in 1549, and D. João III's active support of the Portuguese Inquisition, which was proceeding apace, is paramount.⁹

In 1549, an attempt was made to open up trade on the re-export leg, failed, but was not forgotten. Open trade in the 'commerce of pepper, drugs and merchandise from India'

⁷ letter of 15 February 1549, published as doc. XCV in the 'Apendice' to João Pedro RIBEIRO's *Dissertações chronologicas e criticas*, tomo I, Lisboa (1860), 348-9.

⁸ D. de GOÍIS, letter of July 2, 1544. Published as doc. IX-a in Guilherme J.C. HENRIQUES ed., *Ineditos Goesianos*, vol. I, Lisbon (1896), 93-94.

⁹ J. Lucio d'AZEVEDO, *Historia dos Christãos Novos Portugueses*, Lisbon (1921), 122; Charles AMIEL, 'The archives of the Portuguese Inquisition. A brief survey', in Gustav HENNINGSEN & John TEDESCHI eds., *The Inquisition in early modern Europe. Studies on sources and methods*, De Kalb, Illinois (1986).

(*trato da pimenta, drogas e mercadorias da Índia*) was revamped and launched as an idea on a fully imperial scale again in 1570, this time on the instigation of the influential Portuguese diplomat, Lourenço Pires de Távora, and was an attempt to convert an ill-functioning and ever more clearly nominal monopolistic trading structure into a less demanding duty payment dependent system of trade.¹⁰

But once again we find the cruel logic of capital calling its trumps. We find the ubiquitous Lucas Giraldi, together with his partners, shortly afterwards forming a company obliged to provide (*levar*) three naus a year at their cost for three years; on the re-export leg, Konrad Rott makes his appearance in a contract tendered for 12.000 quintals of pepper at a sales price of 34 ducats a quintal, and which by the second year of operation, was already extended to 30.000 quintals.¹¹

New, audacious, political projects to set redistribution on a different footing again re-emerged, plans around 1575 to replace Antwerp by an official staple in the Spanish provinces of Italy and which won the complicity of the Pope. In the end, a private Florentine company was formed with the Grand Duke of Tuscany investing 100.000 ducats in order to have a fleet running between Lisbon and Livorno. So that in 1576, we have record that Antonio Vecchiotti bought the Portuguese *appalto* in Lisbon and exported pepper to the Grand Duchy.¹²

How does this square with evidence that the following year four Portuguese ships from Lisbon transported spices directly to Venice?¹³ Did this herald a return to the old idea, one which had reared its head in 1504 and 1521, once more in 1549, and which between 1581-85 once again manifested itself in Philip II's proposal to concede a monopoly on pepper imported through Lisbon to the Venetians, as we find one last time in 1598: namely, a means to build up a cooperative redistributive enterprise that would nullify the competition between the two sides, particularly if the Venetians agreed to block Levantine imports through the

¹⁰ 'Regimento do trato da pimenta, drogas e mercadorias da Índia', most ably summarised in AZEVEDO, *Epocas de Portugal económico: esboços de história*, 132 and EÇA, *Normas Económicas da Colonização Portuguesa até 1808*, Coimbra (1921), §40, p. 62 ff.

¹¹ K. HÄBLER, 'K. Rott und die Thüringische Geschäfte', *Neues Archiv für Sachsische Geschichte*, XVI (1895), 177.

¹² Angelo de GUBERNATIS, *Storia dei viaggiatori italiani nelle Indie Orientali*, Livorno (1975), 14.

¹³ mentioned by H. KELLENBENZ, 'Le déclin de Venise et les relations de Venise avec les marchés au Nord des Alpes', in *Aspetti e Cause della Decadenza economica veneziana nel secolo XVII*, Fondazione Giorgio Cini (1961).
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Ottoman empire.¹⁴ Álvarez, in his analysis of these projects, contends that the Spanish King was keen to negotiate with Italians and Germans, 'with the principal aim of depriving the Dutch and English of spices, who were used to buying these goods in Lisbon' (*con la mira principal de privar de especias a los holandeses y a los ingleses, habituados a comprar estos artículos en Lisboa*).¹⁵ Predations on the Atlantic shipping route, moreover, were inflicting high losses on Iberian shipping - an entire fleet of spices from Portugal destined for the Affaitati & Co. was intercepted at Vlissingen in 1572 - and in the same year, Portugal was obliged for these reasons to open the Guinea trade to the English. It had become a much safer bet to deliver copper to Portugal across Venice than across Antwerp, and Genoa had seized many of the financial functions which Antwerp had formerly enjoyed.¹⁶

In any case, the European redistribution of spices did not definitively abandon the Atlantic. I think Braudel reads too much into the letter sent to Simón Ruiz on May 4, 1589, in which his agent points out how it was 'impossible to send pepper to Flanders; to England or Germany from Lisbon, the merchants will be obliged to send it to Italy in any ship they can lay hands on, since the Germans buy theirs in Florence and Venice'. The facts speak somewhat differently.¹⁷ Lübeck and the northern ports, Hamburg and Danzig, start to see Portuguese spices - a source of interest in the *Welseresche Handelsbuch* of 1579, and for which we have sure record of shipments in 1583 and 14,000 quintals in 1591 - and the records of third markets, the Polish customs' book of 1584, testify to a strong commercial influx in colonial goods from the Baltic ports. Even once northern markets could be written off by the Portuguese with the Dutch V.O.C. and English E.I.C. starting their own journeys

¹⁴ A. GUBERNATIS has found an unpublished summary of the 1584 commercial treatise (*trattato*) in Tuscan archives, *Storia dei viaggiatori italiani nelle Indie Orientali*, 14, otherwise the story of the protracted negotiations between Spain and Venice is spun by BRAUDEL, *The Mediterranean World* ., I, 558-60, and is also covered by I. CERVELLI, 'Intorno alla decadenza di Venezia', *Nuova Rivista Storica*, (Sept. - Dec. 1966), 596-642 from diplomatic sources, including letters of the Venetian consul Dall'OLMO, *Informazione sul commercio dei Veneziani in Portogallo e sui mezzi di ristorarlo*, (1584), published by C. CECCHETTI, in *Nozze Thiene da Schio*, (1869), and a formal report made by Antonio BRAGADINO and Jacopo FOSCARINI, *Parere intorno al trattato fra Venezia e Spagna sul traffico del pepe e delle spezierie delle Indie Orientali (1585)*, published by Fr. STEFANI, *Nozze Correr-Fornasari* (1870). TAFURI, *Venice and the Renaissance*, mentions that the issue was re-opened in 1598, 193.

¹⁵ Fernando J.B. ÁLVARES, 'Portugal en la política flamenca de Felipe II. Sal, Pimienta y rebelion en los Países Bajos', *Hispania*, 52 (2), 1992, 700-701.

¹⁶ Jan MATERNÉ & Herman van der WEE, 'Antwerpen als internationaler Markt im 16. und 17. Jahrhundert', in *Wirtschaft, Gesellschaft, Unternehmen. Festschrift für Hans Pohl zum 60. Geburtstag*, (Stuttgart, 1995), 481; F. BRAUDEL speaks of the 'century of the Genoese bankers' (from 1557 to 1627) and reminds us how important and how long a pivot Genoa figured in international finance, *La Méditerranée* ., (1949), I, 454-455.

¹⁷ BRAUDEL, *The Mediterranean*, I, 562. Letter in the municipal library of Valladolid, Ruiz archives. Halikowski-Smith, Stefan (2001), 'Portugal and the European Spice trade, 1480-1580' European University Institute DOI: 10.2870/92585

to the East and a formal state prohibition on Iberic commerce with the ports of Holland, plans were drawn up in Lisbon to collaborate with the Hansa as a means of accessing the markets of the central European heartland.¹⁸ A memoir was presented to the Spanish government in 1610 via the Portuguese Viceroy Christobal de Moura, but in origin drafted by the Hanseatic consul in Lisbon, Johan Kampferbeck.¹⁹ Even if nothing came of it and the Hansa partnered with the Dutch for European re-export, as late as 1618 Gomes Solis could still talk of exporting from Portugal to Flanders, as we have seen.

One of the novelties that emerged in the second half of the sixteenth century as regards the forms of contract trade were the bold schemes for what Jakob Strieder baptised *Weltmonopol* ('world monopoly') which emerged with the release of the concession to run both the *trato de India* and the *trato de Europa* at the same time, and which allowed large consortiums to tender for both at the same time.²⁰ The Affaitati-Giraldi group seem to have achieved this between 1557 and 1559. Fifteen years later, it seems to have been Grand Duke Francesco Medici's ambition to achieve such a thing, at least if we are to go on the rumours in Venice reported by the Spanish ambassador there.²¹ The idea was finally tendered in 1576 to a bigger, and better known international consortium, though the project only went ahead three years later with Konrad Rott of Augsburg at its head. The contract he signed in 1579/80 in the name of his company, the Thüringische Pfefferhandelsgesellschaft, has been heralded as the most far-sighted and risky commercial deal of the century.²² Certainly it's complexity is dazzling, of a kind we do not find in the first half of the century, so much so that the Fuggers dragged their feet, reportedly protesting: 'It is no business for us, what should we do

¹⁸ J. SCHILDHAUER, 'Der Seehandel Danzigs im 16. Jahrhundert und die Verlagerung des Warenverkehrs im Nord- und Mitteleuropäischen Raum', *Jahrbuch für Wirtschaftsgeschichte* 1970/III, pp. 159 & 168-69, and whose calculations are based on the declaration of domicile made by the ships' masters. On the 1591 shipment, see the Fuggers to the Otts, August 24, 1591, Augsburg, in H. FITZLER, 'Der Anteil der Deutschen an der Kolonialpolitik Philipps II von Spanien in Asien', *Vierteljahrschrift für Sozial- und Wirtschaftsgeschichte*, Bd. 28 (1935), 268.

¹⁹ memoir dated 8.iii.1611. A. G. Simancas, Estado 2852.

²⁰ Jacob STRIEDER, *Studien zur Geschichte Kapitalischer Organisationsformen*, 108.

²¹ Ch. de Salazar to the King, Venice, 11 Sept. 1577, Simancas, Estado 1336, in BRAUDEL, *The Mediterranean World*. . 2 ed., (1974), I, 557. The Medici's agent, Sassetti, arrived in Goa in 1582 with an exclusive contract for the supply of pepper for a period of three years, Dietmar ROTHERMUND, *Asian Trade and European Expansion in the Age of Mercantilism*, New Delhi (1981), 20 & V.M. GODINHO, *L'économie de l'Empire Portugais aux XVe et XVIe Siècles*, (1969), 660 ff, 777 ff.

²² Jacob STRIEDER, *Studien zur Geschichte kapitalischer Organisationsformen*. ., 108. In fact, the Crown was not duped into fully surrendering its hold over the pepper market; half of the shipments brought back from the Indies were returned to the King.

in such a labyrinth'.²³ The contract was split into 32 parts, the co-signatories representative of all the great markets of Europe: the Fuggers and Welsers for Germany, Rovalesca and Giraldo Paris for Italy, Francisco and Pedro Malvenda for Spain, and Andrès and Thomas Ximenez for Portugal. The European market was divided up and apportioned respective parties, market-splitting on a grand scale.²⁴ Huge amounts of capital were mobilised to pay for the entire supply of European pepper in advance, in effect a negotiated loan to the Portuguese Crown at low interest rates. But, despite political and financial backing, the plan collapsed: the Spanish King defaulted on full interest payments, Rott over-reached himself and was declared bankrupt, and the medley of European merchant capitalists which rushed in to pick up the pieces, principally Giovanni Rovallesca, but also by necessity the Germans financiers, were more interested in sticking to the *trato de Europa*.²⁵

In the end, the history of Portuguese redistribution of oriental spices died a more predictable death, even if it largely passed noisy domestic commentators such as Frei Nicolau de Oliveira by.²⁶ The return of the first Dutch cargoes of spice from the East Indies in 1601 was enough of a portent to cut Cosimo Ruiz's projected bid for a new pepper contract short, and in the long run to patently reveal the uncompetitiveness of the Portuguese commercial enterprise.²⁷ The situation was in many ways more threatening than simply the loss of northern markets. In 1606 we have note of a ship from Marseille that unloaded indigo, nutmeg and incense in Lisbon itself. Following this a decree was announced on 20 November by which entry into Portugal of spices other than on Portuguese vessels returning from India was prohibited.²⁸

There were, however, still the English. From the *Merchant's Avizo*, a manual of commercial instruction published in 1607 for the English merchants descending upon Iberian markets with their 'New Draperies', we learn that spices could be freely purchased at the

²³ November 8, 1587, in H. FITZLER, 'Der Anteil der Deutschen an der Kolonialpolitik Philipps II von Spanien in Asien', 248-50.

²⁴ from a document found in the Dresden archives.

²⁵ see DOBEL, 'Über einen Pfefferhandel der Welser und Fugger, 1586-91' and KELLENBENZ, 'Le commerce du poivre des Fugger et le marché international du poivre autour de 1600', *Annales E.S.C.*, no. 11 (1956).

²⁶ Frei Nicolau de OLIVEIRA, *Livro das grandezas de Lisboa*, Lisboa: Jorge Rodriguez (1620), fl. 14, who insisted that the port of Lisbon was host to visits from all nations (*navegações de todos os Reinos*) with respect to the spice and drug trade.

²⁷ *Lettres marchandes d'Anvers*, ed. Vazquez de Prada; see Simão Rodrigues to Cosimo Ruiz. 16 May and 13 September 1601, leg. 182.

²⁸ V. M. GODINHO, *L'économie de l'Empire Portugais aux XVe et XVIe siècles* (1969), 831 ff.

market rate from Lewis Betron and Martin Ferbuc, merchants of Lisbon, and that it sufficed to pay a small custom at the portage and another at the India-house. But in a short time, these English merchants would no longer need recourse to Lisbon for such purchases, for it would be their turn to seize the initiative, as the Dutch V.O.C. had already done, and formulate their own European redistributive strategy for these same lucrative eastern products carried back to London on board the fleets of the East India Company.

The commercial problems facing metropolitan Portugal's links with the Estado da Índia were by this time systemic. The founding of the Portuguese East India Company in 1628, a scheme promoted by Philip III to develop a commercial system analagous to the evidently superior Dutch and English *grande compagnie à monopole*, did not manage to convince the merchants of Lisbon that the fortunes of the Indies trade were worthy of reviving.²⁹ We have seen how pepper prices collapsed in section 10.1., how the number of sailings on the Cape route was dramatically reduced in section 3.6. and how importation steadily switched to other products in section 10.4. That the Indies trade for some time had been merely 'an appendage of Brazil's extensive Atlantic commerce', gradually rubbed off on the nature of the Portuguese Empire generally. 'L'empire, d'oriental, devient atlantique'.³⁰

13.2. Thesis conclusion.

The closure of the Crown Feitoria in Antwerp as a historical event of 1549, as I have tried to show, must be viewed as a non-starter. Its *raison d'être* as staple had been undermined by the beginning of contracts of lease on the re-export trade shortly after the decree of January, 1505, and the negotiation and settlement of terms at the Casa da Índia rendered much of the Crown feitoria's brokerage role superfluous. Piratic deprivations, exacerbated by the French Crown's connivance with the issuance of letters of mark from the

²⁹ see A. DISNEY, *Twilight of the Pepper Empire: Portuguese trade in south-east India in the seventeenth century*, (1978, Harvard U.P.), which is a thesis on this company. Also the very complete entry in SERRÃO's *Dicionário de História*, (1966). Otherwise the older monograph by Tito A. de CARVALHO, *As companhias portuguesas de colonização*, Lisbon (1902). The idea to exploit the Orient with the creation of great trading companies was revived by Padre António VIEIRA in his *Proposta* of 1646, who went so far as suggesting that the Portuguese Crown come together with that of France and Sweden for this task (see his *Cartas*, I, 132 and 218), José CALVET DE MAGALHÃES, *História do Pensamento Económico em Portugal*. Coimbra (1967), 247-8. The term 'grande compagnie à monopole' is CHAUNU's, *Conquête et Exploitation des Nouveaux Mondes*, (1969), 213.

³⁰ BENTLEY DUNCAN, 'Navigation between Portugal and Asia in the Sixteenth and Seventeenth Centuries', in E.J. VAN KLEY & C.K. PULLAPILLY, *Asia and the West: Encounters and Exchanges from the Age of Explorations*. Essays in honour of Donald F. Lach, Notre Dame, (1985). GODINHO, *Les Découvertes*. Paris (1990), 69. European University Institute

1520s, rendered sailings up to Antwerp dangerous and dispensable.

At the same time, other functions fulfilled by the *feitor* in Antwerp, such as that of court diplomat, information gatherer and King's *procurador*, if modified, persisted well beyond 1549. Similarly, the redistributive trade of Portuguese spices continued with that port for some time. The monopolistic principle structuring the Portuguese spice trade remained unaffected.

It doesn't really make sense, then, given the complexity of this picture, to investigate collapse either in terms of imperial decadence, price fluctuations on the international market for spices, or even crisis in the global economy. But, by deconstructing the collapse into a set of interconnected commercial ideas and positioning them against the evolving standards of the day, and from there undertaking a more general overview of the European spice trade and, indeed economic circumstances in the middle of the sixteenth century, we have been able to draw some conclusions upon which this thesis can rest.

First, it appears evident that it would have been in Portugal's economic interest to have invested more in her linkages with European commercial circuits on which the lion's share of profit on the Indies trades was made. Portugal might have heeded more astutely the Genoese fear that 'if we are constrained to renounce the Flanders and English trades, by consequence we will be constrained to renounce the Orient trade, because the one depends entirely on the other'.³¹ If this was perhaps faintly recognised, it was never tapped by the Portuguese Crown, which sought primarily to rid itself of the responsibility and to win a diplomatic coup through repeated tenders to the Venetians, but otherwise vacillated in matters of official policy between schemes for open, contracted and monarchical trade, the latter pursued through defunct and ineffectual channels such as the staple at Antwerp and largely as a function of private interests. The half-heartedness of the support behind the staple and the play of different forms of trade only contravenes Steensgaard's claim that the spice trade represents 'one of the few truly successful attempts at monopolisation in history', at least in the Portuguese case, and I would go as far as suggesting that sustaining the pretence of monopoly via the insistence on high sales prices was deeply detrimental to the Portuguese trading enterprise in the long run in that it sold in the interest of immediate profits rather than

³¹ 'se saremo costretti a rinunciare al commercio di Fiandra e d'Inghilterra, di conseguenza saremo costretti a rinunciare al commercio d'Oriente, perché l'uno dipende totalmente dell'altro', cited by Antonia BORLANDI, "'Janua janua italiae": uno sguardo al Quattrocento genovese' in *Archivio storico italiano* (1985), 143 (1), 19.

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from sustainable competitive advantage.³² Unable to physically disable competitors, a policy of sustaining over-inflated prices only backfired: at the same time that it stimulated competition, it made the job of finding re-export contractors who had to clear such goods on to the European market a difficult task. Further to this, the Crown did little to promote the trade, or indeed to protect it, and did not exploit its monopoly for its one potentially redeeming feature - to foster domestic merchant capitalism rather than rely on foreign consortiums, and actively bolster the national merchant marine as other European monarchies were doing at the time. If the Crown recognised the problem, its proclamations in July 1499 (formalised in January 1500), 1549 and 1570 were unrealistic and merely dead letters. The Crown procrastinated on import substitutive policies even once the Indies were clearly put at threat, and failed to develop refineries or a pharmaceuticals industry capable in some way of manufacturing the raw materials which made their way to Lisbon as spices, and of which Antwerp was largely the inheritant beneficiary.

But it may be a serious delusion to suggest that the running of the spice trade for profit was the motivating end of the Portuguese Crown, and not merely a means to achieving more pressing political concerns. We might be tempted to explain the Crown monopoly on the Indies trade as a justifying act of physical, controlling presence over its dominions rather than primarily a bid to extort high sales' prices. Secondly, the attempt to reconstruct the logic of the incessant turn-arounds, contradictions, and unheld to promises in what we have styled 'Crown policy' may well have failed in that 'policy' is simply too demanding a concept for us to impose on that world. Much before mid-century other pressing concerns, principally avoidance of bankruptcy, appear to have been paramount in the King's mind, and the constant recourse to short-term crisis resolution belies no coherent programme beyond immediate survival.³³ Once again spices were means rather than ends. That is not to say - my third point - that there was no long-term direction in which Portugal steered. Indeed, we might suggest that the Portuguese re-export trade was a victim of the striking paradigm shift by which Portugal loosened itself from its traditional European bindings, and became a global, imperial entity whose trading initiatives were directed to the *ultramar* and whose political

³² Niels STEENSGARD, 'Commodities, Bullion and Services in Intercontinental Transactions before 1750', in Hans POHL ed. *The European Discovery of the World*, Stuttgart, (1990), 11.

³³ J. H. ELLIOTT would appear to have drawn much the same conclusions from his work on the problems of imperial finance in Spain. *Imperial Spain, 1479-1716*, chapter 4. Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580 European University Institute

structures lasted until 1975.³⁴ Within this scheme, the decision to withdraw the Crown feitor from Antwerp in 1549 constitutes a signal, amongst many others, of official disinterest and the renunciation of an active Crown concern with European affairs. Damião de Góis's casual claim in 1554 that the Cape route was 'currently so lively that the Portuguese don't attach greater importance to this journey than they would if they sailed from Portugal to England or Belgium' (*actualmente tão frequentado que os portugueses não dão maior importância a essa viagem do que à que tivessem de fazer por mar desde Portugal à Inglaterra ou à Belgica*) can only strike one for its ironic premonition.³⁵

The real pickings on the European re-export trade of spices, then, fell ultimately to an ever shifting oligarchical set of international consortiums, who engineered great private wealth and political influence for themselves by playing on their intermediary positioning between - or indeed, in the case of the Fuggers and some other South German families - as the suppliers of the precious metals on which the Portuguese Crown depended for the financing of her imperial enterprise. At the same time, the Portuguese Crown increasingly relied on these consortiums and their networks for market clearing, not to mention financial loans. Whether this constitutes dependence in the Wallerstinian and neo-Marxist developmental sense is still a matter of academic debate; one can only suggest that the political structures of the Portuguese empire long outlasted the specific family-run business organisations with whom it had dealings, and that the cores of the incipient world economy that these organisations might be seen to represent, such as the southern German cities or northern Italy, underwent a profound check in the seventeenth century: the former finding themselves re-subjugated to the feudal power of territorial lords and reverting to petty methods of production; the latter, once one of the foremost industrial regions in Europe, ever more a depressed agricultural region.³⁶ In many ways, the lessons of the state bankruptcies between 1557-64 suggest a relationship of mutual *interdependence*, to the extent that the fortunes of these enterprises were so tightly interwoven with those of the Iberian Crowns that when the

³⁴ cf. the Spanish empire of Charles V which, J.H. Elliott argues, 'remained obstinately European': in his opinion, it took 150 years for the European imagination to grasp the real novelty of the 'new world', J.H. ELLIOTT, *The Old World and the New, 1492-1650*, (Cambridge, 1970), esp. 85. While the Portuguese Crown relied on the spice trade for as much as 65% of its (liquid) revenue, the Spanish Crown's American revenue represented only 11% of the Crown's total income, John LYNCH, *Spain under the Habsburgs*, i, (Oxford, 1964), 129.

³⁵ D. De GÓIS, *Urbis Olisponsis Descriptio* (1554), ed. and trans. by R. Machado as *Lisboa de Quinhentos*, (1937), 21.

³⁶ R. LUDLOFF, 'Industrial Development in 16-17th century Germany', *Past and Present*, no. 12, (November 1957), 58; Carlo CIPOLLA, 'The Decline of Italy: The Case of a Fully Matured Economy', *Economic History Review*, V, 2, 1952, 180-81.

going got rough, the financier-capitalists could not stand aloof of the crises, and succumbed.³⁷

Perhaps then, ultimately, there were no long-term winners from the spice trade over the course of the sixteenth century, not until a better framework for operation had been worked out between political authority and private enterprise, and which we find in the 'business constitutionalism' implicit within the regimes of the English and Dutch trading companies.³⁸ Further to this, historical developments in the latter part of the sixteenth century suggest new departures which the dependency thesis might have difficulty encompassing: a fundamental realignment of commercial axes on the fortuitous discovery of new sources of precious metals in the New World, so that the purchasing power of specie Filippo Sassetti was witness to in India between 1583-88 was not German copper, but the Spanish *reale da otto*; the emergence of the Portuguese imperial merchant, the *fidalgo tratante*; and successful capital formation beyond the grasp of foreign financiers, such as the Asian country trades which criss-crossed the Indian Ocean, and particularly the commercial prospects offered by the Far East (*Estremo Oriente*).³⁹

But of all these new configurations, perhaps the most significant was the slow reorientation of international trade away from those spices that had impelled the Portuguese push into the wider world a hundred years previously. Plantation-based colonial economies produced new luxuries, sugar and tobacco, chocolate, tea and coffee, cotton textiles that perhaps fitted in better to emergent forms of sociability, fashion, taste and the cultural requirements of public ingestion. In explaining this weighty market shift we are obliged to turn to an analysis of demand, and here there is also an integral dimension of what I have proposed as demystification: the fact that the Portuguese discovery of the route to the Indies was accompanied by direct knowledge of the whereabouts and forms of cultivation of these long-esteemed treasures of the natural world shattered the reification on which their popularity

³⁷ A.É. SAYOUS, 'La déchéance d'un capitalisme de forme ancienne. Augsbourg au temps des grandes faillites', *Annales d'Histoire Economique et Social*, X, Paris (1938), no. 51, 208-234.

³⁸ N. STEENSGAARD, *The Asian Trading Revolution*, Chicago (1974), 111-14, 131-41; K.N. CHAUDHURI, *The Trading World of Asia*, Cambridge University Press, (1978), especially Chapter II. Business constitutionalism is defined as the articulation of fundamental policies with remarkable consistency over the decades, even if there were problems of implementation.

³⁹ on the emergence of the *fidalgo tratante*, see GODINHO, *Les Découvertes*. ., (1990) 'Motivations et attitudes: types socio-culturels', 72-; the promise of the country trades had been recognised early on by Afonso de ALBUQUERQUE, *Cartas de Alf. de Alb.*, I, 404 & 273 pp., and has been historically investigated by C.R. BOXER, 'The Portuguese Empire in the East, 1500-1800', in H.V. LIVERMORE ed., *Portugal and Brazil. An Introduction*, Oxford (1953). See also Francisco BETHENCOURT & K.N. CHAUDHURI ed., *História da expansão portuguesa*, vol. 1, pp. 88. (Návarra, 1998).
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had rested - there was an intrinsic functional utility, to be sure, but much of the myth of spices had been simply passed down out of respect to the Ancients, their pharmacopeia and sheer wonder towards the things of the East. The tragedy of the collapsing lifeline between the Portuguese seaborne Empire of the East and the metropole was not only the inefficiency of its trading operation, but that Lisbon turned its back on those who had supported its empire forging, initially the High German trading community, but behind them the hordes constituting the European market and who were awaiting the excitement of new objects to satisfy their consumptive cravings, but first of all consummate their mystified hopes for a longer, healthier, malady-free existence.

Appendix 1. Revenue accruing to the Portuguese Crown.

	1506	1518-19	1579-80
KINGDOM (1)	173.000	245.000	1.100.000
LISBON CUSTOMS (2)	24.000	40.000	
GOLD (EL MINA)	120.000	120.000	100.000
SLAVES & GUINEAN PEPPER	11.000	?	
MADEIRAN SUGAR	27.000	50.000	200.000
AZORES	2.500	17.500	
CAPE-VERDE ISLANDS	3.000	?	
BRAZIL	5.000 (<i>pau brasil</i>)	?	150.000
INDIES (3)	135.000 (spices)	300.000 (spices)	650.000
FEITORIA DE FLANDRES et. al.	Godinho overly hopeful; from 1505 almost certainly a net RECIPIENT. (4)		
TOTAL STATE RESOURCES	500.500+ (5)	772.500+	2.200.000

Sources: I have drawn the first two columns (1506, 1518-9) from GODINHO, *Os descobrimentos e a economia mundial* (1984), I, 48; *Les découvertes. XVe-XVIe, une révolution des mentalités* (1990), 67 (calculations in cruzados). Partly drawn from the report of the Venetian envoy Cà Masser (in Peragallo, *Cenni Intorno alla Colonia Italiana in Portogallo*, Genova (1907), 94), but corrected and supplemented with data from the *cartas de quitação*. Table for 1518-9 established by Braamcamp FREIRE, *Notícias da Feitoria de Flandres* (1907-08); similarly corrected and supplemented. For 1579-80, the information has been drawn from A.H. de Oliveira MARQUES, *Portugal Quinhentista: Ensaio*, 180-3, which also stems from Italian estimation.

Endnotes:-

(1)(a) extraordinary revenue, it seems, excluded:

- e.g. subsidies granted by the Cortes; e.g. 1544, D. João III called on the *procuradores* of the towns and cities to grant him 200.000 cruzados (Fr. Luiz de SOUSA, 'Annaes..', 274 ss.)

(b) increase undoubtedly in part a result of the concession of ecclesiastical tithes; Leo X's bull *Providum universalis ecclesie* of 29 April, 1514 in which one-third of income from Portuguese benefices to go to Crown (Corpo Diplomático, tomo I, 244).

(c) note: *juros*, private and public loans not considered as revenue.

(2) the *císa* and *dízima* (5% and 10% tax on value of goods respectively) levied on both entry and exit, albeit with numerous concessions to favoured merchants, foreigners particularly, and on desirable goods (e.g. both coined and silver bullion as from 10 June 1437, Livro de Extras f. 239; also munitions brought from Flanders or England, D.P. I, no. 198).

(3) figures obtained supposing a profit of 50% on the average volume of spices unloaded, estimated at the price of the cheapest i.e. pepper. Oriental spices were otherwise mainly nutmeg, ginger, mace, cinnamon and cloves; pepper, however, was by far the most significant (e.g. of the 25.095 quintals transported to Antwerp in June 1538, 22.913 consisted of pepper, 723 ginger, 709 clove, 434 cinnamon, 211 nutmeg, 105 mace. In *Lettres marchandes d'Anvers* ed. Vazquez de Prada, 214).

These calculations are, if anything, understated if they are to be compared to the contemporary reading of the economic possibilities offered by control of the spice trade. For example, to the man responsible for the great weight of empire building in the East, Afonso de Albuquerque, the Crown could stand to gain a million cruzados a year, less the costs and expenses including unforeseen losses at sea. [Letter to D. Manuel, 1 April 1512 in *Cartas...*, vol 1, p34. He goes on: 'e se a nosso Senhor aprouver que o negocio da India se disponha em tal maneira que o bem e riquezas que nela ha vos vão cada ano em vossas frotas, não credo que na Cristandade haverá rei tão rico como Vossa Alteza'.] Similarly, António Galvano, Captain of the Moluccas, estimated that "em trabalhar e poer todas suas forças, pera que todo o crauo viesse ã mão de S.A. com q' Maluco lhe renderia cada ão mais de quinhétos mil cruzados". ['Dos diuersos e desuayrados caminhos, por onde nos tempos passados a pimenta e especearia veyo da India ás nossa partes', repr. (1862), 12]

The calculations for 1579-80 include the winnings from what Boxer called 'the interport trade of Asia', which came to figure as the lion's share in earnings by the end of the sixteenth century, BOXER in H.V. LIVERMORE ed., *Portugal and Brazil. An Introduction*, Oxford (1953), 222.

(4) With the institution of a contracting out system on spices from 1508 whose terms increasingly demanded collection at the Casa da India in Lisbon, revenue on spices was no longer made or even collected by the Feitoria de Flandres. Payments were forwarded from Lisbon in **bills of exchange** (payable chiefly under Manuel's chief *contrador* J. F. da Affaitati or else one of his agents, a certain Ludovico Italiano). Already in 1522 feitor Lourenço Lopes wrote from Antwerp to the secretary of the King, Antonio Carneiro, regarding the failings of this system, the total lack of money and the resort to oaths [C.C., parte 1, maço 28, no. 131].

The Feitoria was supposed to collect a certain tribute from both foreign and national merchants freighting Portuguese ships to go towards the *bolsa da nação*. Initially declared by *alvará* of Afonso V, 23 February 1459 and repeated 8 May 1512 [CFPA, caixa II, m. IV, no. 2; CFPA, caixa 2, m. IV, no. 4], D. Manuel impelled the payment of one *grosso per libra* "pera seguimento dalguas despesas e necessidades da dita nação asy como amtreimento da capella e socorro dos mercadores e mareantes que por caso se perdem e asy pera as emtradas e festas dos primçepes e outras coussas"; subsequently approved by Margaret of Austria, governor of the Low Countries, by ordenance given in Antwerp 16 September, 1512 [idem. caixa III, perg. 3]. The legislation was repeated by *alvará* of 21 June, 1518 with an instructed fine of 200 gold cruzados for shirkers, the loss of all liberties and privileges conceded by the Crown [idem, caixa III, m. IV, no. 5].

(5) cf. Quirini's estimation. He suggested that the annual income of Portugal amounted to 350.000 ducats p.a.

Appendix 2. Weights, measures and currency conversions.

The quantitative and statistical sections of this thesis have been bedevilled for the lack of any clear standardisation, be it of weight, of currency or of the products themselves even within the trading stipulations set down by a city-state like Venice. A pound weight was not a uniform measure, but varied according to the place where it was weighed (for instance *ein Pfund Nürnberger Gewichts* weighed 510 g, while in Venice the *libra sottile* could weigh as little as 301 g) and according to the type of scales. The Troy, or apothecaries' weights adopted by the London College of Physicians in 1618, measured pounds in 12 ounces as oppose to the avoirdupois pound of sixteen ounces favoured by druggists and grocers.¹ Manueline reforms officially altered the weight of a Portuguese quintal from 49.8 kg to 58.74 kg, though it is not clear how quickly the new stipulations were assumed. Barbosa, writing in 1516, suggests that Indian goods continued to be sold in Portugal under the old weight, while 'other goods' were sold by the new weight.² For the sake of comparison we have had, on occasion, to assume a rough correspondance between an English hundredweight, a German Zentner, a Portuguese quintal, a French poid and a Venetian cantar, though I have identified a variance between 42.14 kg for a *cantare forfori* and 58.75 for the *quintal novo*, amounting to a 40% deviation.³ Elsewhere, Z. Pach insists on the use of the metric quintal, which he uses as a shorthand for 100kg, though it is not clear on what inspiration he draws this measurement.⁴ In any case, pepper was commonly sold in bundles or bales (in the Venetian dialect a 'carg', in Portuguese *fardos*) which amounted to four quintals, though bales could also vary widely: of the bales of pepper captured by the San Stefano galleys of Tuscany on July 4, 1579, the weights fluctuated from 260 to 522 pounds.⁵ Some spices, like mirabolans or sugar, were sold in chests (*caixas*).⁶ I have tried to follow the measures presented by Armado Castro by way of general guideline, but insist that any conclusions be treated with a generous leeway.⁷

The official rates of currency conversion were not openly published as started to be the case from the seventeenth century; they can be gleaned, however, from handbooks of trade and commercial correspondance. While in 1460 a cruzado was worth as little as 253 reais, by the beginning of the sixteenth century, 1 Portuguese cruzado was worth approximately 390 reais, which in silver amounted to approx. 35 grams., while a Venetian ducat was equivalent to 380 reais and 1 rheinischer gulden 280 reais.⁸ For the sake of simplicity, many of the cruzado: ducat

¹ Ronald ZUPKO, 'Medieval Apothecary Weights and Measures: the Principal Units of England and France', *Pharmacy in History*, 32, (1990).

² Duarte BARBOSA, *The Book of Duarte Barbosa*, translated into English and edited by M.L. Dames, Hakluyt Society, London (1918), Appendix.

³ how then does Braudel translate the proposal that 'Spain send 30.000 cantars (about 15.000 quintals) of pepper', *The Mediterranean and the Mediterranean world in the age of Philip II*, London: Collins (1972), I, 559?

⁴ Z. PACH, 'The Transylvanian Route of Levantine Trade around 1500', *Studia Historica*, Budapest (1975).

⁵ Archivio di Stato, Firenze. Mediceo del Principato, pezzo 2077, fo. 590.

⁶ see, for example, Archivo General de Simancas, Estado, Legajo 1331, or Arquivo Nacional de Torre do Tombo, C.F.P.A., cx. 4, m. 5, no. 14.

⁷ Armando CASTRO, *História Económica de Portugal*, Lisbon (1985).

⁸ for 1460, DUARTE LEITE, *História dos Descobrimentos*, (1958), 463. There may well be some confusion here, since Duarte PACHECO PEREIRA reports that 325 reais were equivalent to a cruzado in the Prologue to his *Esmeraldo de varia orbi*, Paris and London (1937). Elsewhere, Halikowski-Smith, Stefan (2001) *Portugal and the European spice trade, 1490-1580*, London (2001), 149. DOI: 10.2870/92585

conversions assume a 1: 1 correspondance. In terms of the currency of the Low Countries, in 1535 Clenardus estimated that 10 reais were equivalent to 1 stuiver (of which 20 constituted a gold florin of St. Andrew), while Godinho informs us that a cruzado was worth 6.66 sous (soldos), which was equivalent to 12 dinheiros (denari).⁹

Appendix 3. An example of Portuguese public accounts: the records of João Brandão's feitorship, December 1, 1520 - August 31, 1526.

received from the King et al.	189.755 liv. 4s. 2d.
issuing from the sale of merchandise	19.516 liv. 0s. 2d.
receipts for the King's account	3.714 liv. 1s. 2d.
receipts in specie	13.255 liv. 19s. 10d.
for 716.608 <i>reaes</i> that the successor deposited on the account	597 liv. 3s. 5d.

	226.838 liv. 8s. 9d.

The account was made solvent as follows:

226.838 liv. 8. 9.in <i>reais</i> , at an exchange rate of 60 per <i>sou</i> .	272.206.125
successor's account opens on	268.634.522

balance favourable to the king	3.571.603
Brandão's salary at 1%	2.714.000

balance, which the King left to the son-in-law and heir of J. Brandão, Luis da Silva de Meneses	857.603

VOGT somehow believes that a ducat, whose value always coincided closely with that of the cruzado, was only worth 212.5 reais in 1501, *Portuguese Exploration in Brazil and the Feitoria System, 1500-1530*, University of Virginia (1967), see his calculations for the returning João da Nova fleet, 78-80.

⁹ N. CLENARDUS, 'Carta a Látomo', Évora, 26 March, 1535, in M.G. CEREJEIRA, *O Renascimento em Portugal*, 252; GODINHO, *L'économie de l'Empire Portugais*, (1969), 372.

Appendix 4. Receipts of the King's factor at Cochin between October 22, 1510 - February 22, 1516 and January 1, 1513 -February 28, 1518.

COPPER	26.798 qu., 1 arr., 4 arrat.
SILVER (in ingots)	16.109 marcs, 7 oz., 2.5 oct.
LEAD	3883 quintals, 25 arrateis
QUICKSILVER	810 qu, 23 arrat.
TIN	391 qu., 3 arrob., 8 arrat.
CORAL	357 qu., 1 arrob., 16 arrat.
GOLD	33 marcs, 1 oz., 2 octaves, 3 quarts.
VELVET	1.354 <i>coudées</i> (c. 50cm).

**Appendix 5. Factors appointed to the Feitoria de Flandres.
(taken from Livro no. 210, C.F.P.A.).**

Manuel FERNANDEZ	1495 to January 1498
Tomé LOPES	1.1.1498- 31.12.1505
Afonso MARTINS	21.1.1505- 28.9.1506
Alvaro VAZ	6.5.1507- 30.12.1508
João BRANDAO	1.1.1509 - 22.8.1514
Silvestre NUNES	30.8.1514- 30.7.1517
Francisco PESSOA	30.7.1517- 1.12.1520
João BRANDAO	1.12.1520- 30.8.1526
Rui FERNANDES	6.1.1527 to 1529
Jorge de BARROS	1532 to 1537
Manuel CIRNE	5.2.1537 - 26.7.1540
João REBELO	2.6.1540 - 15.2.1549

Appendix 6. A list of spices from the second century A.D. Alexandrian tariff.

Source: 'Species pertinentes ad vectigal', from the Rescript concerning Eastern Trade in Justinian's Digest of the Roman Law, The Civil Law, tr. and ed. by S.P. Scott, Cincinnati, (1932), 17.

Cinnamomum	
Piper longum	
Piper album	
Folium pentasphaerum	(malabathrum?)
Folium barbaricum	(Barbary leaf)
Costum	
Costamomum	(Putchuk)
Nardi stachys	(spikenard)
Cassia turiana	(Turian cassia)
Xylocassia	(Cassia bark)
Smurna	(myrrh)
Amomum	
Zingiberi	
Malabathrum	(cinnamon leaf)
Aroma indicum	(unidentified Indian spice)
Chalbanë	(galbanum, benzoin?)
Laser	(Asafoetida)
Aloë	
Lycium	(Barberry, <i>Berberis lycium</i>)
Sarcocolla	(Astragalus)
Onyx arabicus	
Cardamomum	
Xylocinnamomum	(cinnamon bark)
Opus byssinum	(fine linen)
Pelles Babylonicæ	
Pelles Parthicæ	
Ebur	(ivory)
Ferrum indicum	
Carpasum	(raw cotton)
Lapis universus	(precious stones, various)
Margarita	(pearls)
Sardonyx	(sardonyx)
Caraunium	(bloodstones)
Hyacinthus	(a precious blue stone, perhaps aquamarine)
Smaragdus	(emeralds)
Adamas	(diamonds)
Sapphirinus	(Scott – surely mistakenly - suggests lapis lazuli)
Callainus	(turquoise)
Beryllus	(beryls)
Chelonia	(tortoise stone)
Opia Indica vel Seriacæ	
Metaxa	(raw silk)
Vestis serica vel subserica	(clothing wholly or partly silk)
Vela tinctoria	(painted hangings)
Carbasea	(fine linen fabrics)
Nema sericum	(silk yarn)
Spadones Indici	(Indian eunuchs)
Leones, leaenæ	
Pardi, leopardi	
Pantheræ	
Purpura	(purple cloth)
Item a pecorum lana	(item from sheep's wool)
Fucus	(orchil, rouge)
Capilli Indici	(Indian hair?)

Appendix 7. Spices (*nomi di spezierie*) listed in Francesco di Balducci Pegalotti, *La pratica della Mercatura*, (1310-1340), ed. Allan Evans (1936), pp. 293-7.

- Argento vivo (*quicksilver*)
 Argento silimato (*corrosive sublimate*)
 Aloe patico (*hepatic aloe*)
 Aloe socoltrino
 Aloe cavallino (*caballine aloe*)
 Allume di rocca di Colonna (*Karalissar, on River Lycus*)
 Allume di sorta della buona lumiera (*choice alum*)
 Allume di Foglia (*Phocean alum*)
 Allurne del Coltai e d'Altoluogo (*Kutahieh, in the principality of Kermian*)
 Allume lupai (*Ulubad alum*)
 Allume chisicco (*Cyzican alum*), allume corda (*poor, fragmentary sort*), allume giachile (*rock alum*): questi tre sono le piggiori ragioni a piggior sorte
 Allume scagliuolo concio (*scayolle*)
 Allume di Castiglio (*Spanish*)
 Allume zuccherino
 Allume bolgano (*volcanic alum*)
 Allume di feccia di vino (*alkaline residue from calcinated lees of wine*)
 Armoniaco (*ammoniacum*)
 Aspalto (*asphalt*)
 Agiafedita (*asafetida*)
 Anisi (*anise*)
 Ambra fine
 Agarigo fine (*agaric*)
 Armonio (*armenium*)
 Argento battuto
 Azzurrino oltre a marino (*ultramarine blue*)
 Azzurrino della Magna (*German blue, azurite*)
 Amido (*starch*)
 Aranci freschi
 Astuffi sagria (*stavesacre*)
 Anzeruto (*sarcocolla*)
 Aghetta (*litharge*)
 Acqua rosa
 Acqua arzente (*alcohol*)
 Belorigi (*belliric myrobolans*)
 Bambagio d'oltre a mare (*cotton*)
 Bambagio di Romania
 Bambagio di Puglia
 Bambagio di Calavria
 Bambagio di Sicilia
 Bambagio di Malta
 Bambagio filato bianco (*cotton thread*)
 Bambagio filato tinto
 Balsimo
 Biacca mezzana (*white lead*)
 Biacca della treccia (*produced with plait stamped*)
 Bituro fresco (*butter?*)
 Borrace pietra e pasta (*borax*)
 Biono da maestri (?)
 Berbari (*Barberry*)
 Balaustre, ciò sono fiori di pomegranate (*Balaustine*)
 Cera di getto (?)
 Cera di Rausia
 Cera di Romania
 Cera Zavorra
 Cera di Spagna
 Cera di Pollana
 Cera di Riga
 Cera cronco (*crude wax*), cioè come viene tratta del mete senza essere affinata
 Cera bianca
 Cera rossa
 Cera verde
 Cannella di sporta
 Cannella di gabbia
 Cardamoni dimestichi
 Cassia fistula
 Comino di Puglia
 Comino di Cerinchan
 Comino di Spagna
 Cinabro (*cinnabar*)
 Chebuli (*chebulic myrobolans*)
 Cardamoni salvatichi
 Cetrini (*citron myrobolans*)
 Candi (*rock candy*)
 Caffera (*camphor*)
 Custoro (*castor*)
 Corpobalsimo (*carpobalsam, inferior grade extracted from a tree*)
 Carte marchigiane
 Carte reali (*paper royal, i.e. of large dimensions*)
 Carte di Dommasco
 Carte da stracciare (*Evans translates as paper-stock?*)
 Colla fiorentina
 Colla bolognese
 Colla di pesce
 Carvi (*caraway*)
 Calamo armatico
 Costo
 Cinabrese (*sinoper, reddish earth*)
 Coloquinta (*colocynth*)
 Cervoni (*glue*)
 Cederni (*citron*)
 Contre da Montrieri (*ashes of Montrieri*)
 Canterelle (*cantharides*)
 Cassia ligna
 Coppa rossa (*green vitriol, protosulphate of iron*)
 Capperi
 Cubebe dimestiche
 Cubebe salvatiche
 Coralli rossi
 Coralli bianchi
 Corallo nero

- Cheponico (?)
 Denti di liofante
 Datteri
 Draganti di Romania (*Tragacanth*)
 Draganti di Turchia
 Dionvici (?)
 Embrici (*emblic myrobolans*)
 Euforbio (*euphorbium*)
 Erba buggia (*tannic bark like sumac*)
 Fusti di gherofani
 Fistuchi (*pistachoes*)
 Finocchi nostrali
 Finocchi di Tunizi
 Fangaccio (*crushed ultramarine*)
 Fiori di lacca (*seed lac*)
 Fiori di cannella (*cassia buds*)
 Fienogregio (*fenugreek*)
 Giengiovo belledi (*native*)
 Giengiovo colombino (*Quilon*)
 Giengiovo crespo (*Black Gin*)
 Giengiovo pilazuto (*peeled*)
 Giengiovo ma a beri (?)
 Galla di Romania
 Galla di Turchia del veglio
 Gherofani
 Galanga grave (*from Java*)
 Galanga leggiere (*from China*)
 Gomerabica
 Galbino (*galbanum*)
 Isquinanti
 Istorace
 Ispigonardi
 Ispico celantico
 Indaco baccaddeo (*Baghdad indigo*)
 Indaco del Golfo
 Indaco di Cipri
 Indaco rifanti
 Incenso (*frankincense*)
 Istagno di Vinegia (*tin*)
 Istagno di Provenza
 Istagno battuto
 Iscotano
 Istinchi
 Iscamonea
 Istamigne (?)
 Ispodio di canna
 Ispodio di liofante
 Iscorza di buggia
 Landano (*ladanum*)
 Litargiro (*litharge*)
 Legno aloe
 Lapis ligni (*lynx stone*)
 Lacca cotta
 Lacca cruda
 Meleghette
 Manna
 Meliloto (*melilot*)
 Mastico primo
 Mastico secondo
 Mastico terzo
 Munmia
 Mandragora
 Mele crudo
 Mosco con falla (*musc in sacs*)
 Mosco senza falla
 Mirabolani conditi
 Mace
 Mirra
 Mondiglia di verzino selvatico (*Brazil wood peelings*)
 Mirabolani chieboli (*chebulic*)
 Mirabolani cetrini (*citron mirabolans*)
 Mondiglia di verzino domestico
 Mandorle
 Minio (*minium, a red oxide of lead, but also cinnabar realgar, dragon's blood*)
 Noce moscade
 Nitro (*nitre*)
 Ninufarte (*nenuphar, white water lily, yellow pond lily*)
 Nigiella
 Noce d'India (*coconut*)
 Noce vomica (*nux vomica*)
 Opopotico (*pontic opium*)
 Orpimento rosso
 Orpimento giallo
 Oppio tebaco
 Oppio tranese
 Oro battuto fine
 Oro di meta
 Olio aurino
 Olio di linseme
 Olio d'uliva
 Ocria bella
 Osso di corno di cervio
 Pepe tondo
 Pepe lungo
 Polvere di zucchero di Cipri
 Polere di zucchero d'Alessandria
 Polt-ere di zucchero di Bambillonia
 Polvere di zucchero del Cracco
 Polvere di zucchero di Soria
 Pezzi di zucchero
 Pece greca
 Pece navale
 Pegola bianca
 Perle
 Pilatro fresco
 Pignocchi
 Pepe bianco
 Papaveri
 Piombio
 Penniti
 Ragia di pino
 Risalgallo fine
 Risalgallo spagnuolo
 Riso d'oltre a mare
 Riso di Spagna
 Riobarbero fine
 Rame viniziano d'una bolla
 Rame viniziano di due bolle
 Rame in grana

Rame vecchio	Zucchero dammaschino
Rame duro in piastre grandi	Zafferano toscano
Regolizia	Zuchero candi
Robbia soda di Romagna	Zucchero rosato
Robbia macinata di Romagna	Zucchero violato
Robbia d' Alessandria	Zenzeverata d' India
Robbia di Romania	
Robbia di Cipri	
Reopotico	
Seme da bachi	
Serrapino	
Sorcocolo	
Sena fresca	
Sale nitro	
Sale genmo	
Sale armoniaco	
Sale alcali	
Sandli bianchi	
Sandoli rossi	
Sapone sodo	
Sapone molle	
Sangue di dragone	
Senape	
Solfo giallo	
Solfo nero	
Santonico	
Siliobalsimo	
Sinobia	
Sermontano	
Sermenti comuni	
Verzino salvatico	
Verzino dimestico	
Verzino colombino	
Vetriuolo di Cipri	
Vernice in grana	
Vernice cotta	
Verderame fine	
Vernicanti rossi	
Trementina	
Turbitti	
Tamerindi	
Triaca fine	
Trefola magna	
Turcisi di Tiro	
Terra sugelata	
Terra di canmello	
Tutia d' Allessandria	
Tratto	
Vivole secche	
Uve passe di Romania	
Verdeterra	
Vescovo	
Vermicegli, cioè tria	
Vino di cotogne	
Uve passe d' Erminia	
Vino di pomegranate	
Zettoara fine	
Zucchero caffettino	
Zucchero mucara	
Zucchero di Bambillonina	
Zucchero musciato, ch'è in gran pani	

Appendix 8. A List of Spices Known and Used in Europe during the Sixteenth Century, their Provenance, Common Names and Ascriptions.

(for sources used see the introduction to §15, 'A List of Sources and Literature.')

Agaricum ('geseubert'). A white, light coloured fungus, *Boletus igniarius* (easily flammable) growing on the larch and used as a styptic (checking the flow of blood by causing the blood-vessels to contract); also ascribed 'operazioni mirabili nelle febbri lunghe e nel modificare i sensi'.⁹ Grew in the mountains of the Trentino; according to Hakluyt was imported from Germany.¹⁰

Almonds, fruit of *Amygdalus communis* L. and widely cultivated across the Mediterranean. The German market tended to be supplied by the produce of Apulia, traded across Venice, while almonds of Provence, Barbary and Valencia were picked out in handbooks of trade. Generically used against trouble with the heart, spleen, liver and kidneys. Otherwise, 'eaten before drinking they prevent drunkenness and anxieties, and they cure freckles'. Widely used in conjunction with other simples (vinegar, honey). The carminative oil was considered to appease ear-ache.¹¹ But also a cheap and common comestible, typically in combination with rice. Besides being used in cooking, they were often blanched and served as dessert with dried fruits.

Aloe. Different aloe drugs were extracted from various species of the Aloeaceae family (*arborescens*, *ferox*, *perrey*, *socotrina*, *vulgaris*). Sixteenth century records reveal an aloe **hepatica**, more formally known as the 'secondo aloè', from the East Indian Jafarad aloe and which caused Boccaccio's Calandrino to cry tears as big as hazelnuts for its quite intolerable taste (*le lagrime che parevan nocciuole sí eran grosse*); aloe **socotrina** (*secutrina*) from Socotra; and aloe **caballina** (*cavallino*), considered the least precious, either a residue after cooking or perhaps a falsification.¹² That of Socotra was highest esteemed, worth at least four times that of Bengali, Cambay or other Indian aloes.¹³ Also mentioned are the washed drug aloe **lota** and, in the case of the Deutschen Arzneibuches, **Cape aloe** (*Aloe ferox*) that grew in South Africa. Heyd suggests that inferior qualities of aloe were grown in Spain and Greece, in southern Italy and Malta.¹⁴

From aloe, and especially the South African varieties, a yellow liquid can be extracted from the leaves, which produced the characteristic bitter, purgative drug *Aloe arborescens* used in the preparation of remedies designed to stimulate the appetite and

⁹ Arnaldo di VILLANOVA, *Il libro.. sul modo di conservare la gioventù e ritardare la vecchiaia*, Genova (1963).

¹⁰ Castore DVRANTE, *Herbario Nuovo*, Rome (1585), 9; R. HAKLUYT, 'A declaration of the places from whence the goods subscribed doe come', in *The Principal Navigations, voyages, traffiques and discoveries of the English nation*, Everyman's Library edition, London (1926), vol. III, 341-.

¹¹ *Tacuinum Sanitatis in Medicina Codex Vindobonensis.* ; Péter MELIUS (1536-72), *Herbárium*, ed. București (1978), 142.

¹² Giovanni BOCCACCIO, *Decameron*, ed. Vittore Branca, Einaudi: Torino (1980), sixth tale (*novella*) of the eighth day, 941; FLÜCKIGER & HANBURY, *Pharmacographia.* .. (1874).

¹³ Socotra was thus inevitably associated with aloe cultivation in the western mind, see Giovanni da UZZANO, *Pratica delle mercatura*, in Pagnini ed. *Della decima e di altre gravetze*, Lisbon & Lucca (1766), t. 418, 48, 74, 112, 114, 192.

¹⁴ W. HEYD, *Histoire du commerce du Levant.* .. repr. (1967), 564.

fortify the organism generally (tonic).¹⁵ It was probably part of this reasoning that aloe wine was considered a thickener of hair texture. A base to the vast majority of perfumes and ointments in use in the Indian Ocean, and considered by Pires a stimulant, carminative and tonic, perfumed rosaries were worked from this wood.¹⁶ Also exploited as an anthraquinone, that is, serving to prepare colorants.

Alum, a white mineral salt (a sulfate of aluminium and potassium) used in medicine and dyeing, as a mordant for dyes like madder that cannot otherwise be fixed. The Lüneburger Inventar distinguishes between **Alumen combustum** (dry alum), **Alumen plumosum** or **plumeum** (feather alum), so called for its elongated appearance, but brittle and considered of inferior quality, and **Alumen saccharinum** (a mixture of alum, sugar - or rosewater - and egg-whites), common in tariff books. The Sibiu pharmacy inventory of 1580 mentions **Alumen crudum**. Thomas Hariot speaks of 'roche allum'.¹⁷

The product was principally traded by the Venetians from the mines at Phocaea in Smyrna and on the Black Sea coast; though smaller and less refined deposits were exploited at Kypsella and in Thrace, especially at Maronia. There was also **alum de Bolcan**, the alum of the Lipari islands, as mentioned in Pegalotti. The Levantine trade in alum was greatly setback by the discovery in 1462 of the Tolfa deposits in the Papal States, subsequently known as *alluyn romse*, or Roman alum, considered 20% superior in quality, but the Hamburg list of 1592 mentions German alum alongside that of Mafferon.

Amber, a fossilised, clear, yellowish-brown resin of an extinct species of pine, *Pinites succinifera*, sold as two variants, **album** and **citrinum**. Widely used for ornamentation, amber was sculpted into crucifixes, buttons, rosaries and incorporated into quality furniture.

Ambergris, also known as **Ambrachan**, *Succinum orientale* or *Poma ambra*, a wax-fat substance, which in hot water produces a musky-resinous smell, and is formed in huge concretions in the final stretch of the intestine of the sperm whale (*Physeter catodon*, Linn. or *Phyceter macrocephalus*), and expelled. It was collected from the coastline, where it was washed up, both at Ossónoba in the Algarve, Setúbal, and along the Spanish coast, though superior substances were widely imported from the eastern coastline of Africa, from the Cape up to the Red Sea, and from outlying archipelagoes such as the Maldives, Laquedives and Nicobar islands.¹⁸ Three qualities were distinguished: light grey, the most precious, dark grey and then black. They were used medicinally as a stimulant against hysteria, were widely employed in perfumes and to embalm people of rank. Drunk in a cordial as an antidote to poison.

¹⁵ E. CRIŞAN, *Materia Medica de Transylvania*, Cluj Napoca (1996), probably from Péter MELIUS, *Herbarium*, repr. (1978), 192.

¹⁶ ORTA, *Coloquios dos simples, e drogas he cousas mediçinaes da India*. ., I, 70-1 and Ficalho ed., note in v. II, 64-65.

¹⁷ Thomas HARIOT, *A Briefe and True Report of the New Found Land of Virginia*. ., London, (1588), facs. at www.people.virginia.edu/~msk5d/hariot/1588/1588-1.html, 04.12.00.

¹⁸ see Duarte BARBOSA, *Livro . . do que viu e ouviu no Oriente*, (1946 ed.), LX, and Alberto IRIA, *O Algarve e os Descobrimentos*, 2nd vol. of *Descobrimentos Portugueses: documentos para a sua história*, ed. João Martins da Silva Marques, 2 tomos, (1956), 206, 207, 238, 271, 409.

Ammoniacum, a gum traded as *Ammoniacum album* and *A. purpureum*.¹⁹ The product of insect punctures principally occurring on *Dorema ammoniacum*, which grows from Persia to India. The gum was used in scent, incense and medicine.

Anacardium, see **Cagiers**.

Anise (Aniseed). Seeds of *Pimpinella anisum* L. used in food-flavouring (in liquors such as anisette and absinth), and employed in meat jellies, as a condiment and in medicine. Grew in the eastern Mediterranean (Syria, Egypt and Crete) and traded as *Annys oosters*; a Spanish product was also in circulation. A stimulant, carminative and galactagogue; used for stomach and throat relief.²⁰

Antimony, a chemical element (Sb), prepared as the white of antimony carbonate (*Cerussa Antimonii Alba Veneta*), 'grea[t]ly commended against the dropsye, the French pockes, melancholie, and diuers other diseases, which it cureth by purging'.²¹ Preparations of antimony were a standard Paracelsian remedy during the sixteenth and seventeenth centuries, and were fashioned into cups which when left with wine, produced a tartar emetic (potassium antimony tartrate).²²

Archil (or **orchil**), a violet dye obtained from lichens of the *Rocella* and *Lecanora* genera. The fortunes of orchil are closely tied up with the Florentine family of the same name, Rucellai, one of whose thirteenth century forebears - so the legend goes - discovered the dye while travelling and applied it to wool mixed with urine.²³ Archil was found in abundance on rocks and cliffs in the Portuguese mid-Atlantic archipelagos, and figure in Dom Henrique's will; later attempts were made to cultivate it in the Canary Islands as an alternative, like woad, to eastern supplies of indigo, but a harsh climate and the fact that the islands were still not fully subdued as late as the 1490s meant that the enterprise met with difficulties and little success.²⁴

Arsenic. The Sibiu Inventory of 1580 mentions *arsenicum album* (arsenic acid) and *a. citrinum* (an 'auripigment').

Asafoetida, a gum-resin extracted from *Ferula narthex* Boiss. and allied umbelliferous plants such as *Ferula assa-foetida* L., *Ferula foetida* Regel, growing in the Levant, Iran and Central Asia (Afghanistan and northern India-Pakistan or 'Lahor' as was commonly

¹⁹ *Alphita* (of Salerno), published in Salvatore de RENZI, *Collectio Salernitana*, Napoli, (1852-9), vol. III, 271-322.

²⁰ GERARD, *The Second Booke of the Historie of Plants*, (1597), ch. 397.

²¹ Timothy BRIGHT, *A Treatise, wherein is declared*. . (1580), 42.

²² see the picture of such in Abraham WOLF, *A History of Science, Technology and Philosophy in the 16th and 16th centuries*, 2 vols., re-ed. Bristol: Thoemmes Press, (1999), 439.

²³ Gabriella CONTORNI & Leandro Maria BARTOLI, *Il giardino degli Orti Oricellari*, Firenze (1990), 4.

²⁴ Peter RUSSELL, 'Price Henry and the necessary end', in *Portugal, Spain and the African Atlantic, 1343-1490: chivalry and crusade from John of Gaunt to Henry the Navigator*, Aldershot: Variorum (1995), 10; David ABULAFIA, 'L'Economia italiana e le economie mediterranee ed atlantiche', in *Italia all' fine del Medioevo*, conference organised at San Miniato, settembre 2000, 10.

written). The sap hardens into a resinous gum with an extremely strong, somewhat repellent alliaceous (onion-like) odour (known in German as *Teufelsdreck*, or 'dirt of the devil'). If eaten as food in Iran, in the Occident more typically repository of medicinal virtues.

Asphaltum Lignum, a kind of vegetal tar or liquid pitch (*pece liquido*) commonly from Syria or Judea. Used against rheumatism and tuberculosis by way of fumigation; externally applied against the spastic state.

Auripigmentum, see **orpiment**. Although a dye from a naturally occurring compound of arsenic, auripigmentum was often mistakenly understood to be '(fine) gold beaten in masse', see entry for **gold**.

Azurite, also known as *azzurro dell'Allemagna* or *citramarinum*, and by Agricola as *Berglasur*. A basic carbonate of copper, $2\text{CuCO}_3 \cdot \text{Cu}(\text{OH})_2$, incorporated into a mixture of melted wax, resins and oils and kneaded in a cloth under a dilute solution of lye until washed out, azurite was the most important blue pigment in European medieval painting. Hungary was the principal source of azurite until the mid-seventeenth century, when supplies were cut off by the Turks.²⁵

Balm, see **Balsam**.

Balsam, or sometimes just **balm**. A generic for the white, aromatic liquid flowing from one of a number of 'diuers trees growing in the Indies', tending to go red and solidify. The most renowned balsam was said to come from a cultivated grove at Matarea 'five Lombard miles' east out of Cairo and watered by a miraculous source, but despite von Harff's proclamation that 'this balsam grows in no part of the earth only in this place so far as I have heard', the product came from across Arabia; it was distinguished between *Oprobalsamum*, a product of direct incisions into the tree, *Carpobalsamum*, the fruit extract and, less commonly, *Xylobalsamum*, understood to be either the wood itself or else an extract from the branch.²⁶ Balsam was used in religious worship, baptisms and in Holy Oils. It was used medicinally to treat wounds and conserve corpses and, following the theory of signatures, as a tranquilliser and to banish all clouds and storms from the mind with the purpose of attaining mental peace and serenity.²⁷

Basil (*Ocimum basilicum*, L.). Resolves 'superfluities' (*superfluitates*) of the brain. The *Tacuinum Sanitatis* #2644 considered it was most widely found *regionibus orientalibus*.

Bastard (Flat) Sea Holly, or *Eryngium planum* L. This root appears in the Braşov inventory of 1576. Imported into England. Perhaps it was an Alpine plant - Gerard tells us that the plant was sometimes named *Alpinum Eryngium*. The same considered that

²⁵ P. LAURIE, *The Pigments and Mediums of the Old Masters*, London (1914); Joyce PLESTERS, 'Ultramarine Blue, Natural and Artificial', in Ashok ROY, *Artists' Pigments, A Handbook of Their History and Characteristics*, O.U.P. (1993), 38-9.

²⁶ Arnold von HARFF, *The Pilgrimage of Arnold von Harff, Knight from Cologne, through Italy, Syria, Egypt, Arabia, Ethiopia, Nubia, Palestine*. . (1496-99), trans. M. Letts, Hakluyt edition repr. Kraus Ltd., Liechtenstein (1967), 127.

²⁷ Abraham COWLEY, *Plantarum, the third and last volume of the works of Mr. Abraham Cowley, including his six books of plants* (1721), 248-9.

'they have as yet no vse in medicine, and are neither vsed to be eaten', but would consider them of hot vertues; Melius ascribes the thistle diuretic properties, and uses in disease of the spleen and of the liver.²⁸

Bdellium, an aromatic gum resin identified with that of *Balsamodendron Mukul Hooker*, imported from Arabia Felix, Mecca and the Holy Land, 'of a sweete smell and bitter taste. It hath vertue to mollifie and ripen hard swellings, and is good against the stiffnesse of sinewes or other parts, and against the biting of venomous beasts'.²⁹ Timothy Bright (12) suggests it was oft counterfeited with gooms; seems to have been a substitute for myrrh.

Bees-Wax, bleached (*Cera alba*) and unbleached (*Cera flava*); the Sibiu inventory of 1580 mentions a *Cera rubra*. Widely used in various preparations, plasters, unguents etc. Dioscorides recommended its use in eruptions and, as a fumigation, in the treatment of hysteria, skin problems, tumours and as a diuretic. Mixed with quince juice, administered against dysentery.³⁰

Benzoin, belzuinum, benjoim or gum Benjamin. Known in early modern medical texts as *As(s)a dulcis*. One of a number of resinous balsams, used medicinally and as incense, obtained by wounding the bark of certain tropical Asian species of *Styrax*, especially *S. benzoin* Dryander. First appearing in travel literature and in customs records around the mid-fifteenth century, the gum-resin was largely familiarised by the Portuguese, even if it continued to arrive in Italy through the Levant.³¹ Two varieties, a white and black, one brought to Calicut from Pegu, the other from Sumatra and Java. The former was the best, with its almond scent (also known as *Belzuinum Mandolalo*), also accredited with the perfume of daisies or, according to Pyrard de Laval, vanilla, and from 'Sian and Baros'; the other dark and worth only half the price and from Sumatra. Also reported to grow on the east coast of North America.³² One variant had to be burned rather than used in its natural state (*Belzuinum burned*, from Bonnia). The resin is principally two alcohols combined with cinnamic acid and free cinnamonic and benzoic acids, and was used in the treatment of coughs, to ease ulcerated lungs, to cure asthma, and as an antiseptic. Enjoyed a further role as an antidote to poisons.

Betel, or bastard pepper (*Piper betle* L., or *Chavica betel*). Although producing a fruit 'of the taste of Pepper, yet very pleasant to the palate', this epiphyte was better known for its leaves, which were chewed in the mouth rolled up with a variety of other

²⁸ GERARD, *The Historie of Plants*, (1597), vol. II, chap. 469, 1003; MELIUS, *Herbárium*, repr. (1978), 182.

²⁹ John BULLOKAR, *An English Expositor* (1616), @19275323, in Early Modern Dictionaries Database (EMEDD), ed. Ian Lancashire, Oct. 15, 1999, <http://www.utoronto.ca/english/emedd>.

³⁰ W.I. SCHNEIDER, *Lexicon zur Arzneimittelgeschichte*, Frankfurt am Main (1968), I, 28-9.

³¹ see Bartholomeo di PA(S)XI, *Tariffa di Pasi*. (1521), 62.

³² *Roteiro que em descobrimento da Índia pelo Cabo da Bon Esperança fez em 1497*, ed. D. Kopke & Ant. da Costa Paiva, Porto: (1838), 89-90; ORTA, *Coloquios dos simples, e drogas he cousas medicinais da India*. , I, 84; HAKLUYT, 'A declaration of the places from whence the goods subscribed doe come', *The Principal Navigations, voyages, traffiques and discoveries of the English nation*, vol. III, 342; 'Samuel Mace's Voyage to the coast south of Cape Hatteras', in *New American World. A Documentary History of North America to 1612*, ed. David B. Quinn, London: Macmillan, (1979), #780, 162.

ingredients, most commonly the areca nut, alongside whose palm this epiphyte was often purposefully planted. It grew along the Indian littoral, but in the Moluccas equally, where it was chewed with wild nutmeg.³³ The betel was of a bitter taste recognised to stave off bad breath, accompanied by a strong stimulating effect that Orta declares a sexual excitant. The masticant was also used to relieve heartburn, to keep hunger and thirst at bay, and to help memory. The habit was acquired by the Portuguese but not exported beyond the Levant, though it was ascribed qualities and degrees and most likely therefore adopted by 'Empiricke Phisitions' in Europe.³⁴

Bezoar Stone (*Lapis Bezoar Orient*). Oval concretions, compounds of lime and magnesium phosphate, found in the stomachs of certain herbivorous mammals, Orta suggested the 'Persian buck', the *Capra segragus* and *Antilopa dorcana* of the Caucasus, Persia and India (commonly 'Tartaria'), but domestic European deer equally. The 'stone of Malaca' came from the 'bilious bladder' of the porcupine; while later, according to José de Acosta, bezoars were brought from South American species such as the Peruvian goat (*Guanacos*, *Pacos*, *Vicugnes* and *Taragues*), while Monardes preferred the 'stone of caymans' (from the crocodile) or the stones of manatee heads (*lamantin*) and of the shark (*tiburón*).³⁵

An ancient Indian drug, known equally to the Arabs, the bezoar stone only entered the European pharmacopeia in the sixteenth century. Considered a prized antidote to poison and plague and internal ailments supposedly caused by toxic substances.³⁶ Other recipes ascribed the bezoar, once reduced to powder, as profitable to those suffering nervous disorders.

Bhang, or Indian hemp. Could be found in the apothecary shops of Seville, and was used as an aphrodisiac and stimulant, and in larger doses as a narcotic and hallucinatory drug.³⁷

Blueberries (*Vaccinium Myrtyllus*), the fruit but also the leaf (Brasov, 1576).

Blue bice, an artificial basic carbonate of copper of approximately the same chemical composition as azurite, a pigment with strong associations to Bremen blue, or *bleu de cendres*.

Bolus, mineral silicates, particularly of aluminium (aluminium oxide) extracted from argillaceous earth such as china clay. Of the many variants, the most commonly cited is Bolus armena(-icus), the red earth of Armenia, though the Leipzig retail market regulations speak of yellow earth (*gelbe Erde*).

Borax, or sodium borate, which was extracted from certain Tibetan lakes and was used as a *tincal* or flux in goldworking and other metal trades, 'to lute glasses', as well as

³³ details in GODINHO, *Os descobrimentos e a economia mundial*, II, 203; Hubert JACOBS, *A Treatise on the Moluccas (c.1544)* ., 43.

³⁴ GERARD, *The Historie of Plants*, London (1597), ch. 147, 1357.

³⁵ see Joseph ACOSTA, 'Of the Bezoars Stone', in Samuel PURCHAS, *Hakluytus Posthumus* ., Glasgow (1905-07), ch. 42, 145-.

³⁶ W.I. SCHNEIDER, *Lexicon zur Arzneimittelgeschichte*, I, Frankfurt am Main (1968), 21-22.

medicinally at different times as a sedative, anodyne, refrigerant, febrifuge, antispasmodic, astringent, diuretic and emollient, as a 'great opener of obstructions of young women' etc.³⁸ Known vaguely by Orta, if found widely at Calicut, where it had come down from Cambay and Lahore, and bought in small quantities by the Venetians in Alexandria as cakes (*pate*), whence it was taken back to the lagoon city for purification and distribution across Europe.³⁹

Brazil-wood, or **verzin(-o/i)**, also **pau brasil** pg., the heartwood of *Caesalpinia sappan*, *C. echinata* etc. Similar to red sandal-wood in colour to the point of confusion.⁴⁰ Grew in Tennasserim (the south of Burma) as well as Ceylon and in India, the best of which could be found around Quilon and took its name from it (Verzino colombino, or cholomni). Brazil-wood featured prominently in the returns from Vasco da Gama's fleet of 1503 and was collected by the factor at Cochin subsequently. 'True' brazil-wood of the species *Cesalpina brasiliensis* (*C. echinata*)?, the species richest in colouring matter, was discovered in abundance in the Portuguese South American territory of this name, especially Pernambuco, and was leased in commerce from the Crown from 1502. It seems to have been transplanted to São Thomé during the second half of the sixteenth century; Hakluyt suggests curiously that 'verzini' was otherwise found in China.⁴¹ A species of brazil-wood had nonetheless existed in near-reach of Europe, typically north-western Africa or the Levant, from where it was actively exported by the thirteenth century at the latest. A similar heartwood - exploited for identical functions to brazil-wood - was extracted from American logwood *Haematoxylin campechianum*, which Columbus was quick to recognise; he was subsequently commanded by Ferdinand and Isabella to 'bring yearly from the Island of Hispaniola 111 quintals', and Las Casas confirmed that Columbus 'brought their Highnesses an abundance of dyewood'.⁴²

Brazil-wood arrived on the market in billets, and was best sought heavy and hard. It was exploited for its red dye, prized for the rose tones it imparted upon cloth, miniatures and manuscripts, by rasping the wood to a coarse powder, sprinkling with water and leaving to ferment for several weeks. Medically brazil-wood was applied as an astringent, as were its flowers. The wood, too, once stripped of the bark and sapwood, was used in furniture and marquetry.

Brimstone, see sulphur.

Cagiers, or **Anacardium**, colloquially the *faua de Malaqua*. From the dried bean an oil is extracted that 'hath a causticke or corrosiue qualitie & it taketh away warts, breaketh apostumes & preuaileth against leprie, Alopecia, and easeth the paine of the teeth, being

³⁸ see J. WORTH ESTES, *Dictionary of Protopharmacology. Therapeutic Practices, 1700-1850*, (1990); John WOODALL, *The Surgions Mate, or Military and Domestique Surgery*, London (1639).

³⁹ d'ORTA, *Colóquios dos simples, e drogas he cousas mediçinais da India* ., (1895), I, 277ff.; M. SANUDO, *Diarii* ., t. XXXII, 438-9, (1522).

⁴⁰ ORTA, *Coloquios dos simples, e drogas he cousas mediçinais da India* ., II, 283, 188-89; PEGALOTTI, *La Pratica della Mercatura*, repr. (1936), 361, 377.

⁴¹ R. HAKLUYT, 'A declaration of the places from whence the goods subscribed doe come', *The English Voyages*., v. III, 341.

⁴² Royal Mandate Ordering Restitution to the Admiral & extract from Las Casas in *Journals and Other Documents on the Life and Voyages of Christopher Columbus*, ed. Samuel Eliot Morison, New York: Heritage Press, (1963), 301-302.

put into the hollownes thereof'. Grew in 'most parts of the East Indies', commonly Malabar, Cambay and the Deccan, and according to Hakluyt, even the Maldives.⁴³

Calamus. *Calamus aromaticus*, *c. odoratus*, sweet calamus or sweet cane (calamus means cane in Latin). Conventionally ascribed to *Andropogon Schoenanthus*, the sweet-scented lemon grass of Malabar.⁴⁴ Sixteenth century commentators, for example, inform us that calamus grew especially in Dabul and Chaul.⁴⁵ But a number of historical botanists have protested, claiming that calamus was too widely available for it to have been the *Andropogon*. They prefer *Acorus aromaticus*, the Linnean *Acorus calamus* or sweet flag, which naturally grew right across the northern hemisphere's temperate band, and was clonally introduced from Turkey around 1550 and naturalised about 1660. Hakluyt, writing in 1589, suggests it was imported from Constantinople; Thomas Thomas, in 1587, suggests Arabia.⁴⁶

There were two different species, then, in circulation, one indigenous, one imported from India, probably the 'calamus verus'. It was prized for its outstanding aroma, which is said to be close to that of the rose; its knotted stalk was cut, dried and reduced to a powder, an ingredient in the most precious of perfumes. As a pulped stalk, considered to be an antidote to poison and an aperient.⁴⁷

Camphor (*Cinnamomum camphora*), A whitish, translucent, crystalline volatile substance, chemically it belongs to vegetable oils and has a bitter, aromatic taste and character. Common camphor (C₁₀H₁₆O) is prepared by distillation and sublimation from *Camphora officinarum*, a tree indigenous to Java, Sumatra, Japan and other lauraceous trees growing equally in China and Borneo.⁴⁸ The Portuguese came to know of one species, *Dryobalanops aromatica* Goertn., which grew on Sumatra and Borneo, and which was sent on, via Malacca, to India. By the time of Orta, the *Dryobalanops* of Borneo was extremely highly prized and worth as much as a hundred times that of the Chinese; consequently, it became a mixer for specific blends.⁴⁹ The cheapest on the market at Calicut was sold in bars, and had been ordered from China for the Portuguese; the most expensive was eaten or used to treat the eyes, against bleeding from the nose, heating of

⁴³ GERARD, *The Third Booke of the Historie of Plants*, (1597), ch. 151.

⁴⁴ There is a further lemon grass, or *Cymbopogon citratus*, known in India as Indian verbena, whose characteristic lemon taste comes from its citric content.

⁴⁵ ORTA, *Coloquios dos simples, e drogas he cousas mediçinais da India*. . II, 315; GOMÇALLVEZ. Nicolão. *Livro que trata das cousas da India e do Japão*, ed. Adelino de Almeida Calado, Coimbra (1957). 54-55.

⁴⁶ Kurt RÜEGG, *Beiträge zur Geschichte der officinellen Drogen Crocus, Acorus calamus und Colchicum*, Dissertation Basel (1936); MABBERLEY, *The Plant-Book. A portable dictionary of the higher plants*, C.U.P. 7.

⁴⁷ (*The*) *Calendar of State Papers and Manuscripts relating to English affairs existing in the Archives and Collections of Venice etc.* ed. Rawdon Brown, I, 67.

⁴⁸ ORTA, *Coloquios dos simples, e drogas he cousas mediçinais da India*. ., I, 151 ff.

⁴⁹ CLUSIUS, *Exoticorum libri decem*. ., (1605), 161; ORTA, *Coloquios dos simples, e drogas he cousas mediçinais da India*. ., 1c; FEDERICI, 1c, published as 'Viaggi di C. Federici e G. Balbi alle Indie Orientale', *Il Nuovo Ramusio*, IV, Roma (1962).

the liver and acute fevers.⁵⁰

Canafistula or **Canaficiers** (*Cassia fistula*, L.), the 'Pudding Pipe' tree. References to *canne* in returning cargoes is more likely to be canafistula than, as Greenlee is keen to interpret, bamboo.⁵¹ This pod, blackened when ripe, encases a sweetish, lightly purgative pulp. While found in abundance in Egypt ('Turkey') - von Harff observed them growing in the walled gardens of Alexandria - as well as parts of the Levant, from where they plied the Levantine route into Europe, the Portuguese took to exporting that which they discovered between Cannanore and Diu.⁵² Canafistula was also known to grow plentifully in Java, though it is not known to what degree it was exploited, and in Brazil, where it was gathered freely by the expedition of 1501-02 ('& qui trovãmo canna fistula molto grossa e verde e secca i cima delli arbori').⁵³ Horse cassia (*Cassia grandis*) growing in the West Indies was understood by Peter Martyr to be 'the fruit or spice which the apothecaries call cassia fistula' and was rated as one of the 'valuable products from the New World'.⁵⁴ Used as a strong laxative, and to 'purify' the blood and bile at times of high fever. As well as the pulp, it seems the seed was also used and ascribed great medicinal value.⁵⁵

Capers (*Capparis spinosa* L.), cultivated and growing wild across the Mediterranean, but commonly imported from Alexandria, for floral buds pickled as a relish. As well as the bud, it seems the thick bark covering the root (*corticis*) was much used to combat 'hard spleenes' and to expel 'thicke and grosse humours', and to clean old sores, flush out worms (when taken with vinegar) and against tooth-ache.⁵⁶ Much used in cooking for sauces.

Caraway (*Carum carui*), its small fruits or seeds yield a volatile oil, and are considered aromatic and carminative and widely used for flavouring cakes, sweetmeats etc. Also considered a hair restorative.⁵⁷ Widely traded up and down the Rhine in the sixteenth century, though Braunstein indicated that Apulia in origin provided caraway seeds for the

⁵⁰ Duarte BARBOSA & Simão ÁLVARES, *Livro das cousas*. ., f. 14; *Tacuinum Sanitatis in Medicina Codex Vindobonensis Series Nova 2644 der Österreichischen National Bibliothek*.

⁵¹ see, for example, letter of Amerigo Vespucci to Lorenzo de' Medici, Beseguiche, 4 June 1501, published in (*The Voyage of Pedro Alvares Cabral to Brazil and India*, Hakluyt ser. II, vol. LXXXI, ed. Greenlee, London (1938), 159-.

⁵² N. GOMÇALLVEZ, *Livro que trata das cousas da India e do Japão*, 54.

⁵³ D. BARBOSA, *Livro de Duarte Barbosa*, 319, a; PIRES, *The Suma Oriental*, 513; MARCONDES DE SOUZA, *Amérigo Vespucci e suas viagens*, S. Paulo (1949), 270.

⁵⁴ Peter MARTYR, *De Rebus Oceanicis et Orbe Novo Decades Tres*, Basel, (1533) repr. Ann Arbor: University Microfilms, (1966), trans. by Richard Eden as *The Decades of the Newe Worlde or West India*, London (1555).

⁵⁵ MATHEW, K.S., *Portuguese Trade with India in the Sixteenth Century*, 130 & da ORTA, *Coloquios dos simples, e drogas he cousas mediçinais da India*. ., I, 194.

⁵⁶ GERARD, *The Historie of Plants*, (1597), vol. 2, ch. 317; MELIUS, *Herbárium*, 152.

⁵⁷ *Encyclopaedia of the Middle Ages*, cited under 'Herbs', 183.

German market, where known as *venezianischer Kümmel*.⁵⁸

Cardamom, fruit of *Elettaria cardamomum* L. and sometimes loosely applied to *Aframomum* & *Amomum* species such as *A. verum* (registered as Ammomi in sixteenth century inventories). Grew in the area between Cannanore and Chale near Calicut, but more profusely still in the mountainous Kourg and Wynad districts of the Ghats. Some was taken from Bengal.⁵⁹ There are apparently two kinds of cardamom, big and small, or in Pegalotti's terminology, *cardamoni salvatichi* and *domestici*.⁶⁰ It seems to have been commonly used as a condiment, but also medically as an appetiser, a strengthener of the stomach and aid to digestion, a relief from wind and aid to unblocking the liver. Also a comforter of the womb and to bring on menses; a strengthener of the mind and a countermeasure to epilepsy and frenesy.

Carobs, or **locust-beans**, also known as **St. John's bread**, pods of *Ceratonia siliqua* L. full of juicy pulp containing sugar and gum (tragasol, a tragacanth substitute), used as fodder and alcohol source, seeds a coffee substitute, formerly sold as sweets and used as weights, also yielding a diabetic flour, timber for furniture etc.⁶¹

Cassia or *Cassia lignea* (also known as Chinese or bastard cinnamon, or xilocassia). This is one of the great botanical *faux amis*, in that this coarse bark was taken from one of the poor brothers of Ceylon cinnamon (*Cinnamomum aromaticum* Nees) that grew in Malabar, southern China and Burma in the sixteenth century and is not in any way connected with the Cassia genus of the Leguminosae family (though was this too a spice, and might it have arrived from Gran Cayro as Hakluyt records?). By *cinnamomum crassius*, Conti meant cassia, and Barbosa *cannella selvatica* and *c. trista*; others, such as John Russel, author of the fifteenth century *Boke of Nurture*, simply call cassia *canelle*. The Grete Herball speaks of two variants, one that is 'lyke cynamum / drawynge to colour of russet and hath a sharpe sauour', the other unsatisfactorily 'also toward russet or gray and hath in partes dyvers coloures'.⁶² Dragendorff considers cassia a product of *Cinnamomum pauciflorum nees*, distinguished by its thicker bark, obtained from the periodic surgery of the branches of this tree, rather than bush, and cassia's stronger, coarser flavour than cinnamon; today it is conventionally accorded *Cinnamomum aromaticum* Nees, and also known as *C. cassia*.⁶³ The bark tended to be used as a cheaper substitute of cinnamon;

⁵⁸ P. BRAUNSTEIN, 'Wirtschaftliche Beziehungen zwischen Nürnberg und Italien im Spätmittelalter', in *Beiträge zur Wirtschaftsgeschichte Nürnbergs*, I. (1967), 389.

⁵⁹ ORTA, *Coloquios dos simples, e drogas he cousas medicinais da India*. ., I, 174 & Nicolão GOMÇALLVEZ, *Livro que trata das cousas da India e do Japão*, ed. Adelino de Almeida Calado, Coimbra (1957), 54. HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries of the English nation*, III, 341- suggests Amomum was brought from China; might he have been mistaken?

⁶⁰ PEGALOTTI, *La Pratica della Mercatura*, (1936), 211, 296. The small cardamom might be a successful case of import substitution, for HAKLUYT, *The Principal Navigations*. ., recorded its commercial provenance as Barcelona, v. III, 342.

⁶¹ see *The International Tree Crops Journal*, Berkhamsted: A.B. Academic Publications, I, (1980), 15.

⁶² 'Carta de Jeronimo de Santo Estevam', printed by Valentim Fernandes (1502) as *Marco Polo - O Livro de Marco Polo* and re-ed. Lisbon (1922) by Francisco Maria Esteves Pereira, fl. 95v; BARBOSA, *Livro de Duarte Barbosa*, II, 228; Garcia d'ORTA, *Coloquios dos simples, e drogas he couças medicinais da India*. ., (1895) ed., v. II, 206.

⁶³ cited in D. GEORG, *Die Heilpflanzen der verschiedenen Völker und Zeiten*, Stuttgart (1898), 239. Halikowski Smith, Stefan (2001), 'Portugal and the European Spice trade, 1480-1580' European University Institute DOI: 10.2870/92585

Linschoten suggests it was worth only 1/5 that of the cinnamon of Ceylon. More specifically, it served as a general diuretic and against dysury (difficulty in urinating), to 'disperse the humours', as a fragrance against 'stenche of the mouthe and armeholes' and, as with many aromatics, to act upon the brain in cases of epilepsy or fainting. Also, for the general benefit and removal of obstructions in a number of organs - the liver, stomach, heart, spleen, kidneys, bladder and 'mylt'. Also applied to cold stomachs, to bring on the menses and strengthen the womb.⁶⁴ The dried cassia buds were also marketed as a spice.

Cassumunar (also known as yellow zedoary and curcuma aromatica), another species of the *Curcuma* genus, exploited for its aromatic tuberous root, which was also known generically as wild ginger.

Castor, a musk secreted by the European beaver (*Castor Biber L.*) common in Muscovite Rus and the wilder forest reaches of Germany (Scythia), but increasingly imported from further east, from Siberia.⁶⁵ A long standing medicine used as an anti-hysteric, anti-epileptic, against cholera and feverish illnesses, and to combat urinary afflictions.⁶⁶

Castor bean, from the tropical plant. Laxative properties; use of oil to cure itching, sores, and herpes when applied as a plaster; pounded leaves used to heal external ulcers.⁶⁷

Cat's eyes (*olhos de gato*, Pg.), any of certain gems (*crisoliti*, it.) having a chatoyant luster, especially chrysoberyl, found in Ceylon.⁶⁸

Ceruse, see **White Lead**.

Chalk, or *Creta alba*, a calcium carbonate. A number of chalk beds were laid down across western Europe in the Cretaceous age, the best for artists' use being considered the 'Champagne chalk' from northern France. As a powder, chalk was used as a pigment, but also as bulking agent for other coloured paints. Primed with lead white by Dutch painters of the sixteenth and seventeenth centuries to make *loot wit*, a ceruse or Spanish white.⁶⁹ Levigated chalk was used as a mild abrasive for polishing gold and silver.

China root. This is the root of *Smilax china*, L., a thorny creeper growing in thickets in China, Japan and the provinces of north-eastern India.⁷⁰ Also thought to grow (wishful

⁶⁴ 'Cassea lignea vel xilocassia', *The Grete Herball. . whiche geueth parfyt knowlege and vnd[er]standyng of all maner of herbs*, London (1526).

⁶⁵ R. HAKLUYT, 'A declaration of the places from whence the goods subscribed doe come', *The Principal Navigations, voyages, traffiques and discoveries. .*, v. III, 342.

⁶⁶ W.I. SCHNEIDER, *Lexicon zur Arzneimittelgeschichte*, I, Frankfurt am Main (1968), 28.

⁶⁷ LÖNITZER, *Kreütterbuch* (1557).

⁶⁸ 'Viaggio di Geronimo da Santo Stefano e di Geronimo Adorno in India nel 1494-99', ed. Peragallo, Rome (1901), 9.

⁶⁹ VAN DE GRAAF, J. A., 'Betekenis en toepassing van 'Lootwit' en 'Schelpwit' in de XVIIe-Eeuwse Nederlandse Schilderkunst', *Bulletin de l'Institut Royal du Patrimoine Artistique*, 4, (1961), 198-201.

⁷⁰ might HAKLUYT have confused the root for the wood when he spoke of *Lignum de China*, *The Principal Navigations, voyages, traffiques and discoveries. .*, v. III, 342?

thinking) by the first explorers on the east coast of America.⁷¹ Described by Orta as a root 'eaten in China cooked with meat as we do with turnips. It is a shrub of 5-6 ft. high, root about 1 ft., one thick root and one thin. The leaves are shaped like young orange leaves'.⁷² It was also eaten raw, and was widely used as an aphrodisiac, an alterative and a sudorific, not just in the relief of venereal diseases, especially syphilis, but also for scrofula and paralysis (French and 'this strange seiknes of Nappillis' [Naples]. Emperor Charles V urged Vesalius to administer it to relieve his 'gout', probably a euphemism for syphilis, as its regimen was less rigorous and privatory as the standard treatment with guaiac. The Portuguese only seem to have got to know it around 1535 from Chinese traders active at Goa; it was received in Europe 'with high praises in irregular circles', i.e. those circles where venereal diseases were prevalent. Several treatises were written on it including the first part of Andreas Vesalius' *Epistola rationem, modumque propinandi radicis Chymae decocti, quo nuper invictissimus Carolus V. imperator usus est*, Venice (1546), in reply to Roelants, his friend and city physician of Mechlen; it does not figure in Gerard's *Herbal*. Most remarkably, modern analysis has suggested that 'the drug is not known to contain any substance to which its supposed medicinal virtues can be referred'.⁷³

Cinnabar (*Cinnabaris nativum*), the red crystalline form of mercuric sulfide found widely, but not abundantly, across the world; sometimes confused with the spice known as dragon's blood, principally *Draecaena cinnabari* q.v., so that crystalline cinnabar indicated as *cinnabaris metallica*. Frederick Ruysch (1638-1731), Professor of Anatomy in Amsterdam and celebrated for his vascular injection technique, used a combination of wax, resins, talc and cinnabar to permeate the vascular system.⁷⁴

Cinnamon, bark of *Cinnamomum verum*, J. Presl. also known as *C. zeylanicum*, and a number of other species such as *C. burmannii* and *C. iners* that grew widely across the interior of India.⁷⁵ Columbus discovered the canella or white cinnamon (*Cannella winterana*) of the West Indies, which Monardes wrote of as 'Cinnamon of our Indias'.⁷⁶ Ceylon cinnamon was universally acclaimed as the better; at the time of Garcia d'Orta, 400 lbs. of that of Malabar was worth one ducat, whereas ten ducats bought only 100 lbs. of that of Ceylon.⁷⁷ Widely used as a germ-killer, aromatic and medicine: a mild relief for the stomach and to cool off the pain of the colic; to remove bad oral smells; a

⁷¹ 'Samuel Mace's Voyage to the coast south of Cape Hatteras', in *New American World*. . . , ed. David B. QUINN, (1979), #780, 162.

⁷² ORTA, Garcia de, *Coloquios dos simples, e drogas he cousas medicinaes da India*. ., Goa (1563), t. II, 259-270.

⁷³ FLÜCKIGER & HANBURY, *Pharmacographia: a history of the principle drugs of vegetable origin met with in Great Britain and British India*, (1874), 649.

⁷⁴ Ian BAMFORTH, 'The Plastinators', *The London Review of Books*, November 2000.

⁷⁵ IBN BATTUTA, *Voyages d'Ibn Batoutah*, trans. C. Defrémery, Paris: Impr. Impériale, (1874), vol. IV, 99.

⁷⁶ George GRIFFENHAGEN, 'The Materia Medica of Christopher Columbus', *Pharmacy in History*, (1992), 34, no. 3, 133; Nicholas MONARDES, *Historia medicinal de las cosas que se traen de nuestra Indias Occidentales, que sirven al uso de medicina*., Seville (1571), trans. as *Joyfull Newes Out of the Newe Founde Worlde* by John Frampton, London (1577), repr. New York (1967).

⁷⁷ Carolus CLUSIUS, *Exoticorum libri decem*, (1605), 168 ff.
 Hailewold Smith, Stefan (2007), 'Portugal and the European Spice trade, 1480-1580
 European University Institute

menstrual regulator when drunk with myrrh; a diuretic (increases urine output), but also an anti-diarrhoeic and relief for wind; an antidote against deadly poisons; used to bring old men out of 'dead swoonds', in other words against fainting; thought to sharpen the sight, strengthen the liver and stomach, improve circulation and 'comfort the hart'; as a healing ointment or salve for external wounds, cracked lips and rotting gums, good for sunburn; as a 'water' for hastening childbirth and to increase sperm; an appetisant and digestant.⁷⁸ Orta reminds us that beyond its medical functions, cinnamon was a fine culinary seasoning (*boa para te~perarem os comeres*), whilst the coarser pieces of bark, when boiled with its fruit (could this be the *fleur de cammelle* referred to in the mid-fifteenth century *Ryght good lernyng?*), yield a fragrant oil.

Civet, see **Musk**.

Clove, the dried bud of *Syzygium aromaticum*, L.. It grew almost exclusively in the Moluccas (Maluco, Ternate, Amboina).⁷⁹ Used for aching and infected teeth and to heal fresh wounds and stop the flow of blood; 'to comfort the sinewes' and 'the naturall parts' generally, particularly the giddiness of the head [headache] and weak sight, but also the heart and stomach; as a preventative for catching colds; against diarrhea.⁸⁰ Widely used on the womb against 'passions de la matrice', and suffocation (hysteria) and miscarriage specifically.⁸¹ Orta, on the other hand, was not particularly enthusiastic of cloves' medicinal properties, and thought them better off in cooking.⁸² Cloves were frequently used in aromatic drinks. The leaves of the clove were also traded.⁸³

Cocculus indicus, or Indian berry, the seeds of *Anamirta cocculus*, Wight & Arn. Used against skin and nervous problems, it is also a dangerous alkaloid parasiticide, the picrotoxin used in barbiturate poisoning.

Cochineal, a dye from the cochineal insect (*Dactylopius coccus*, formerly *Coccus cacti*), a parasite of the nopal cactus of the West Indies and Mexico. Discovered in 1512, it soon displaced kermes, whose colouring agent (carminic acid) it shares, as it contained more dye, and was even more in demand after the use of a tin salt brightening the colour had been discovered.⁸⁴

⁷⁸ d'ORTA, *Coloquios dos simples, e drogas he cousas mediçinais da India* ., 131 ff.; RIDDLE, 'The Introduction and Use of Eastern Drugs in the Early Middle Ages', *Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften*, 49, (1965), 649; BROSSE, Jacques ed., *A rota das especiarias*, I.N.A.P.A., Lisbon (1989); John FITZHERBERT, *Third Booke of Husbandrie*, (1598), ch. 40.

⁷⁹ D. BARBOSA, *Livro de Duarte Barbosa*, edition of 1812, II, 228; R. HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries of the English nation*, III, 341.

⁸⁰ J. FITZHERBERT, *Third Booke of Husbandrie* (1598), ch. 44, 130.

⁸¹ Michele SAVONAROLA, *Libreto de tutte le cosse che si magnano; un' opera di dietetica del sec. XV*, Almquisté Wiskell inter., *Acta Universitatis Stockholmiensis*, 13, Stockholm (1988), 162-165.

⁸² d'ORTA, *Colloquies on the Simples and Drugs of India*, repr. in M. PEARSON, *Spices in the Indian Ocean World*, (1996), 23-27.

⁸³ F. PEGALOTTI, *La Pratica della Mercatura*, 135, 229; G. da UZZANO, *Pratica delle mercatura*; FLÜCKIGER, 'Die Frankfurter Liste', *Archiv der Pharmazie*, 201, (1872), II, 38.

⁸⁴ see Raymond L. LEE, 'American Cochineal in European commerce, 1562-1625', *Journal of Modern History*, 23, (1951), 205-24.

Coconuts, known colloquially as Nuces Indici, fruit of *Cocos nucifera* L. Grew in plenty between Cannanore and Viliñjan in the South, and widely traded by the Portuguese as c(h)opra, or dried coconut.⁸⁵ Gerard nevertheless is keener to believe that the majority that reached Europe came rather from the West Indies and the Central American littoral. He limits himself to describing Indian medicinal and practical uses of this plant, but suggests that making drinking cups from the kernel, garnished with silver, had reached England.⁸⁶

Colocynth, also known as Coloquintida, bitter apple or ‘vine of Sodom’, marketed as a dried pulp or seeds of *Citrullus colocynthis* Schrader. Cultivated and naturalised in Mediterranean North Africa, Cyprus and India, colocynth had been used as a strong purgative since Assyrian times.⁸⁷

Copra, see **Coconut**.

Coral, of which *Corralia alba* (*Madrepora occulta* L.) and *Corralia rubra* (*Gorgonia nobilis*). Although for the Middle Ages, Heyd could speak of coral as ‘parmi les produits que l’Occident avait à offrir à l’Orient’, being widely caught in the western Mediterranean off Ceuta and Portugal and in the waters around Corsica, Sardinia and Sicily, entries in Hakluyt speak of ‘Corall of Levant’, exported via Malabar and Corralina, from the Red Sea.⁸⁸ Some branches of coral were presented to Albrecht Dürer as a gift by Damião de Góis, treasured for its ‘exceptional beauty’.⁸⁹ Used against boils and furuncles, proto-inflammatory abscesses (flegmons), eye problems, spleen diseases and for urine retention, a heart tonic, against haemorrhages and epilepsy. One of the key constituents of Raleigh’s Great Cordial. Sometimes used as a substitute for calcium carbonate, and ascribed deficient children.⁹⁰

Coriander (*Coriandrum sativum*), seeds of. Native to the eastern Mediterranean where cultivated in large quantities as far back as the Mycenaean age. Widely used as a condiment, considered to aid digestion and fortify the stomach, used against worms. Also used for flavouring wines, preserves and even meat dishes. Bright considers the Coriander of Ethiopia to be the best.⁹¹

Co(a)rnelian, a red or reddish variety of chalcedony, used in jewelry. 851 kg were

⁸⁵ T. PIRES, *The Suma Oriental*, 83; A.N.T.T. Chancel. de D. Manuel, Liv. 38, fl. 125r.-126r.

⁸⁶ GERARD, *The Third Booke..*, (1597), ch. 134.

⁸⁷ H.A. HOPPE, *Drogenkunde: Handbuch der pflanzlichen und tierischen Rohstoffe*, Hamburg: Cram, de Gruyter & Co., (1958), 89. The plant has been specifically addressed by Pierre CUTTAT, *Beiträge zur Geschichte der officinellen Drogen Semen Lini, Fructus Colocynthis, Radix Saponariae*, Diss. Zürich (1937).

⁸⁸ see, for example, P. MASSON, *Les Compagnies du Corail* (Paris. 1908), 196.

⁸⁹ cited by Marcel BATAILLON, *Le Cosmopolitisme de Damião de Góis.*, (1952), 129.

⁹⁰ SCHNEIDER, W.I., *Lexicon zur Arzneimittelgeschichte*, 33-34.

⁹¹ P. MELIUS, *Herbárium*, ed. București (1978), 194; T. BRIGHT, *A Treatise, wherein is declared the sufficiency of English medicines*, 12.

registered on a Lisbon-bound fleet of 1518.⁹²

Costus. Root of *Aucklandia costus*, Falc.; Carmélia Opsomer prefers *Saussurea lappa* (Decaisne) C.B. Clarke. Exported from Cambay but thought to have come from the basin of the Indus. Available as *costus amara(us)* and *costus dolce (dulcis)*, the latter from *Costus speciosus* of Cambay and Sindh, which reached Europe via Hormuz and Aden, this spice was ascribed powerful curative properties as an expectorant, and anti-asthmatic, as a diuretic. Used against afflictions of the spleen, repository of melancholy, and against ailments of the womb provoked by cold, notably sterility. Costus was occasionally burnt as incense, and was widely available through the Middle Ages, even in Anglo-Saxon England.⁹³

Cottons, from India and the Levant. Indian light cottons were introduced to the European market by the Portuguese during the sixteenth century; they had previously been imported from Cyprus, Little Armenia and Syria, especially the cities of Hamah and Aleppo, around which the plant was intensively cultivated, but also in central Syria around Damascus.⁹⁴ Imported in many different forms; as raw cotton, cotton thread, unworked coloured cloth (*Tapeten*), fine white cotton fabric known as *sinawoffen* and *pombale*, and other woven materials such as *carmole*, *spica*, *nirbit* and *affron* worked at Cambay.⁹⁵ 46 quintals of cloth were exported by the Portuguese in 1518.⁹⁶

Cow-hides (*Endeghi.. zurli*), from North Africa.

Cubeb Pepper, fruit of *Piper Cubeba* L. A creeper similar to the pepper plant that grew in Java, Borneo and Sumatra (Orta, I, 288); Hakluyt would like to think it came from China (341). The dried unripe fruit was known as *fructus carpesiorum* and used medicinally to 'strengthen a weake and windy stomach' and in disease of the bladder and urinary passages; it was often presented confected so as to overcome the sharp and bitter taste of the drug, and later to flavour cigarettes.⁹⁷

Cumin, seeds of *Cuminum cyminum*, used as a flavouring in cakes, cheeses, liquors, curried sauces. Pegalotti ascribes its provenance to Puglia, Spain and, ambiguously, Cerinchan. Might this be a source in Morocco, Spain or Ethiopia as a document discovered by Gilliodts Van Severen from 1371 and a comment from Guicciardini would suggest?⁹⁸ Hakluyt prefers Balsara, or Basra, which would have been marketed at the

⁹² Geneviève BOUCHON, *Navires et Cargaisons retour de l'Inde en 1518*, Paris (1977).

⁹³ PEGALOTTI, *La Pratica della Mercatura*, 135, 296, 300; COCKAYNE, *Leechdoms, wordcunning, and starcraft of early England*, 3 vols., London (1961), v. II, 238, 276.

⁹⁴ on this, see Lodovico BARTHEMA, *Itinerario del venerable varon micer Luis patricio Romano: enel qual cueta mucha parte dela ethiopia Egipto. . .*, Seville (1520), translated into English and edited as *Travelers in Disguise. . .*, by L.D. Hammond (Camb., Mass., 1963).

⁹⁵ *Driffas von Kaufmannschaft* (1514/5), 165, 193 and *Buch über Handelsbräuche - Der Quartband von 1506*, 203, in K.O. MÜLLER, *Welthandelsgebräuche (1480-1540)*, Stuttgart (1934).

⁹⁶ A.N.T.T. *Nucleo Antigo*, no. 705.

⁹⁷ LANGHAM, *Gard. Health* (1633), 175.

⁹⁸ Jacques MERTENS, 'Des Bonnes Épices au Bon Poids', in C.G.E.R., (1992), 94.

great Levantine emporia frequented by Italian, particularly Venetian merchants. The Hamburg commercial register suggests Sicily; Abulafia suggests neighbouring Malta was a standard supplier in the Middle Ages. In any case, cumin was a popular and inexpensive spice over the course of the period in question, much used as a flavouring for poultry.

Cypress nuts of the *Cupressus* species used against all issues of blood ('laske and bloudie flixe'), ulcers and polyeps.⁹⁹ Also used to produce a scented oil.

Dates, commonly from Arabia Felix and imported through Alexandria.¹⁰⁰ With the Portuguese Cape route, Indian dates (*tâmaras da Índia*) from the date palm reached the European market. Used medicinally as the base to the popular electuary diaphoenicum.

Datura, or **thorn-apple**, or **strammony** (stramonium). A powerful intoxicant, used in medicine as an analgesic and antispasmodic, that entered the European pharmacopeia during the sixteenth century and was a subject of considerable interest to botanists and illustrators of botanical books.¹⁰¹

Demnar, from Siacca and Blinton.¹⁰²

Diagredye, or **Diagrydium** or **Diakrydium**, from the same family as scammony and frequently substituted for the same.¹⁰³

Diasprum viride, from Cambay. Could this be the Diosporon of Pliny, though this would appear, through Gerarde's interpretation, to be a very common plant, growing everywhere.

Dittany, a wild herb formerly supposed to be of medicinal value. Traded as *Dictamnium album*, from Lombardy.

Dragon's Blood. several reddish resins used in varnishes etc., from *Draecaena cinnabari*, *D. draco*, and *D. ombet*, a palm family indigenous to South-East Asia, from which Hakluyt specifies Socotra, though the latter species grows in the Canary islands, North West Africa and perhaps in Portugal, where Hieronymus Münzer marvelled at one in 1494.¹⁰⁴ Medicinally an astringent, technically used in the manufacture of red dye (*Beizen*) and lacquer.¹⁰⁵

⁹⁹ GERARD, *The Third Booke*, (1597), ch. 42.

¹⁰⁰ R. HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries.*., v. III, 343.

¹⁰¹ see, for example, the catalogue to an exhibition of the drawings of Jacopo Ligozzi (1542-1626), *Gabinetto disegni e stampe*, Galleria degli Uffizi, Florence (1961), fig. 6.

¹⁰² R. HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries.*., 342.

¹⁰³ FLÜCKIGER, 'Die Frankfurter Liste', *Archiv der Pharmazie*, 201, (1872), 49; 'Nordlinger Register', *Archiv der Pharmazie*, 211 (1877), 17.

¹⁰⁴ Hieronymus MÜNZER, *Itinerarium sive peregrinatio excellentissimi viri artium ac utriusque medicinae Doctoris Hieronimi Monetarii de Feltkirchen civis Nurembergensis*, trans. and with commentary by B. de Vasconcelos, in *O Instituto*, Coimbra (1930), 4a série, vol. 9, número 5, 554-5.

¹⁰⁵ MABBERLEY, *The Plant-Book. A portable dictionary of the higher plants*, 193 thinks *D. cinnabari* is indigenous to Socotra; for function, BARTELS, *Drogenhandel und apothekenrechtliche Beziehungen zwischen Skandinavien und Nürnberg*, (1966), 70, 842.

Earthworm, *Lumbricus terrestris* L. In western pharmacopeias of the 16th-18th century figure as diuretics, anti-spasmodics, diaphoretics (inducing sweat), against gout, and specifically against arthritis and scurvy.¹⁰⁶ Salmon thought that *aqua et spiritus lumbricorum* was excellent against consumptions, against jaundice, obstructions of the gall, hectic fevers and most diseases of the head and brain.¹⁰⁷

Ebony, used extensively in such guises as the housing to reliquaries and for small house altars, its black colour thought to provide an aesthetically pleasing foil to silver. Augsburg was the leading centre of ebony craftsmanship at the time (late sixteenth and seventeenth century); one of the largest collections in the world is the Ecclesiastical Treasury in Vienna.

Elephant's tusks or, as recorded by Pegalotti, **denti di Liofante**. See **ivory**.

Epithimum, or **Dodder**, an epiphyte growing upon thyme and imported from Crete. According to Gerard, this Galenic *simples* 'helpethe all the infirmities of the milte: it is a remedie against obstructions and hard wennie swellings: it taketh awaie olde head aches, the falling sicknesse, madnesse that commeth of melancholy, and especially that which proceedeth from the spleene and parts thereabout: it is good for those that haue the French disease, and such as be troubled with contagious vlcers, the leprosie, and the scabbie euill'.¹⁰⁸

Erva lombr(o/i)gue(i)ra (Pg.), a sort of herb that grew in Ormuz and Cambay, and was exported to Malabar, where bought in relatively abundant quantities by the factor at Cannanore.¹⁰⁹ It appears subsequently at Antwerp alongside other Portuguese spices in 1517.¹¹⁰ What might this have been? Might it have been the *erva Malavar*, used, in Orta's 27th Colloquy, in a compound 'contra as câmaras'?¹¹¹

Euphorbium, the gum of *Euphorbia resinifera*. Brought principally from Libya and the coast of Barbary, the latex of all species is toxic ('it burneth the mouth extremely'), but when diluted and compounded made into a plaster against 'all aches of the ioints', used to restore speech when applied to the nape of the neck and to combat baldness and 'scurfe and scales of the head'.¹¹²

Fenugreek (*Trigonella foenum-graecum* L.), whose fragrant seeds a carminative,

¹⁰⁶ W.I. SCHNEIDER, *Lexicon zur Arzneimittelgeschichte*, (1968), 48-49.

¹⁰⁷ *Pharmacopoeia Londinensis or the New London Dispensatory*, London, (1682).

¹⁰⁸ GERARDE, *Herball or General Historie of Plants*, (1597), ch. 166 (The Second Book).

¹⁰⁹ Nycolão GOMÇALLVEZ, *Livro que trata das cousas da India e do Japão*, ed. Adelino de Almeida Calado, ed. Coimbra (1957), 55-56; A.N.T.T., Chancel. de D. Manuel, Liv: 36, fl. 13r.

¹¹⁰ 'Carta de Francisco Pessoa e Ruy Fernandez a D. Manuel', 24 March 1517, A.N.T.T., C.C., I, in m. 21.

¹¹¹ The *Grande Enciclopédia Portuguesa-Brasileira* is on the wrong trail when it suggests Abrótano-macho or *Artemisia variabilis*, growing spontaneously in the Douro and Beiras regions of Portugal; and equally Arapacaba, or pinkroot (also Indian pink), the root of *Spigelia anthelmica* Lin., a vermifuge, toxic in doses above 3 g. but growing in central America, the West Indies and Brasil.

¹¹² GERARD, *The Second Booke*, (1597), chap. 476.
Halikowski Smith, Stefan (2001), Portugal and the European Spice Trade, 1480-1580
European University Institute

aphrodisiac and used against worms; Melius suggests they possessed mild laxative and emetic properties, and were used to clean the head.¹¹³ Boissonnade suggests that *fenu grec* from the Ile-de-France or the south of France was used as a dyestuff.¹¹⁴

Fennel (*Foeniculum vulgare* Miller, or *F. officinale*). Seeds used as an aperitif, a carminative and to settle the stomach, to counteract dropsy, increase a woman's milk and was a remedy for mistiness of the eyes and worms in the ears. Otherwise, the best was considered 'fresh from the vegetable garden' (*melior est recens domesticus*). Native to the Eastern Mediterranean, but spread widely across Europe adapting to local climates.¹¹⁵

Figs, fruit of *Ficus carica*, a comestible. The figs of Málaga became famous in northern Europe in the fifteenth century as this was a convenient market on the sea route from the Mediterranean up to the Low Countries.¹¹⁶ Often traded in frails, that is rush baskets of no fixed size.

Frankincense, sometimes known by its Latin name *thus*, whose precious gum, yielded as a milky liquid hardening to a yellow colour, was burned as incense. Larousse suggests it came principally from the *Boswellia carteri*, a plant growing wild in Arabia, Socotra and Abyssinia - having disappeared from Europe in classical times - and in the Terebinth family. Like myrrh, the gum was exported to the Malabar coast, from where it was exported to Portugal. Used to clear eye-sight, close raw wounds, cleanse ulcers, helped against loose stomachs.

Galangal, Galingale or Siamese ginger, a rhizome of *Alpinia Galanga* Willd. or *Alpinia officinarum* scented like ginger. Tended to be traded either as a heavy and a lighter sort, though Portuguese commentators speak of three variants: a standard variety that grew in Mangalore and Chaul (and could be found traded at Goa and Cochin), while the small variety grew in China and the big in Java. It was the Chinese one that the Portuguese prized, as had been the case previously, though the Javan was also traded.¹¹⁷ Apparently, the galingale that had the reddest violet colour when cut was the better, while it should be heavy and firm to the knife and not light, like dead wood. Used in medicine as a general tonic (for digestion, weak stomach and flatulence, as well as fainting and strengthening the mind) as well as condiment and source of essential oil.¹¹⁸

¹¹³ Attila SZABÓ, 'Étude et note à l'herbarium de Melius', in Péter MELIUS, *Herbárium*, București (1978), 411; see also *ibidem.*, 229.

¹¹⁴ BOISSONNADE, *Le mouvement commercial entre la France et les îles britanniques.*, (1920), 3.

¹¹⁵ Zach. P. PANȚU, *Plantele cunoscute de poporul român*, București (1906), 176; *Tacuinum Sanitatis in Medicina Codex Vindobonensis Series Nova 2644 der Österreichischen National Bibliothek* ed. F. Unterkircher, Graz (1967).

¹¹⁶ David ABULAFIA, *L'Economia italiana e le economie mediterranee ed atlantiche.*, (2000).

¹¹⁷ CLUSIUS, *Exoticorum libri decem, quibus animalium, plantarum, aromatum, aliorumque peregrinorum fructuum historiae describuntur.*; Gasparo BALBI, 'Viaggio', in Theodor De BRY, *Orient India*, (1590-1634), 7th part, 39.

¹¹⁸ W. STIEDA, *Hansisch-venetianische Beziehungen im 15. Jahrhundert*, Rostock (1894), 97; ORTA, *Coloquios dos simples, e drogas he cousas medicinais da India.* ed. Ficalho, Lisbon (1895), I, 353 ff; Nicolão GOMÇALLVEZ (Simão ÁLVARES), *Livro das cousas da India e Japão*, f. 14v.

Galbanum, a Persian gum of medicinal application derived from *Ferula galbaniflua*, *F. gummosa* and *F. rubricaulis* and investigated by Boissier (1810-1885). Rawdon-Brown considered galbanum to have been 'much used by women'.

Gallnut, or just **galls**, excrescences provoked by the sting of the gall wasp (*Cynips tinctoria*) on the leaves of certain types of oak; Chinese gall (*Gallae sinensis*) are created by lice acting on the leaves of sumac(h). Commonly listed are Gallae di Soria (Syria), also traded as Aleppo galls, and those of Istria and Puglia, as well as Greece; the Frankfurter Liste mentions Galli Romani, while the Dispensatorium of Valerius Cordus speaks of *Galla sicca* (asiatica), by which is meant the Chinese variant. Hakluyt adds galls from Cambay and Bengal. Widely available at Alexandria, where the best were chosen for their heaviness and greenish colour. Their pleasing symmetry meant they were often used as ornaments, but more importantly, whilst full of tannin, with astringent qualities, they were used in medicine, often ground into a powder. Also used in the production of ink.¹¹⁹

Garlic.

Garnets (*garnadas* Pg.), deep-red, transparent vitreous mineral considered a gem, typically from Ceylon.¹²⁰

Gentian, *Gentiana lutea*. Indigenous to Europe. It was the root, or a preparation of it, that was traded and used as a tonic.

Ginger, a rhizome of *Zinziber officinale*. Commentaries distinguish between *beledi* (*beledin*, *belendyn*) ginger, which grew in the vicinity of Calicut and the interior (Hakluyt mentions Cambay), and *dely* ginger, which was to be found between Mount Deli and Cannanore. Also mentioned is *imber di Bulli* (probably the Ginger Dabulin, from Dabul and not, as Bartels contends, from Puglia, or, as Lane suggests, coated or dressed ginger), *Sorati* (from Surat and not, as Bartels contends, Syria), *Ma(o)rdassi* ('from Mordas within Cambaia', and not ginger of a 'biting' taste as Lane proposes) and *Mechin* (also *meykyn*, from Mecca but probably Arabia more generally). A tariff list of 1512 mentions *Ingwer cholobyn*, known in Italian texts as *colombino*, from Koulam, green ginger preserved in syrup, white dried and candied ginger, and red, coloured ginger.

Of the unworked gingers, *beledi* ginger was considered the best; previously the accolade tended to go to Meccan or 'string' ginger.¹²¹ *Beledi* ginger also grew in Bengal, where it was prepared as a conserve (probably the afore-mentioned green ginger).¹²² *Meykyn* ginger was considered as a product of inferior quality, and might have been the dog-ginger (*zenzero canino*) that appears in Florentine receptaries (*ricettari*)

¹¹⁹ *Recettes pour faire de l'encre d'Albus Porzellus, maître d'écriture à Milan*, in MERRIFIELD, *Original treatises* 289 ss.

¹²⁰ 'Viaggio di Geronimo da Santo Stefano e di Geronimo Adorno in India nel 1494-99', ed. Peragallo, Rome (1901), 9.

¹²¹ see Margaret Wade LABORGE, 'The Spice Account', in *History Today*, (1965), vol. XV, no. 1, 32.

¹²² Duarte BARBOSA, *The Book of Duarte Barbosa - an account of the countries bordering on the Indian Ocean and their inhabitants*, (1518) trans. and ed. by M. L. Dames, London (1921), vol. II, 228 and Tomé PIRES, *Suma Oriental*, 83.

of the fourteenth century; Pegalotti concurs in suggesting it was small and hard to cut.¹²³

Ginger had principally a culinary use, and figured in nearly every fifteenth century recipe of the English court: gingerbread was a favourite of Elizabeth I, and was eaten as a conserve with sugar, esteemed by the Portuguese as an *achar* (pickle), a delicacy.¹²⁴ In medicine, it was chiefly ascribed generic usages, although it helped to combat 'slymy humours' in the stomach (the Salernitan school texts suggest 'humores siccāt'), to warm the body and aid digestion, to 'comfort the liver' and keep flatulence at bay.¹²⁵ Syrup of ginger was recommended to be taken on long trips so as to settle the stomach 'if it should be upset by excessive vomiting.'¹²⁶ Used on the respiratory tract, particularly against the cough, and for the heart in cases of syncope. A common aphrodisiac ('Atque sitim pellit, iuvenes quoque cogit amare').¹²⁷ Henry VIII recommended its use against the plague.

Glass. Despite production in a growing number of European cities, most famously Venice, oriental glass enjoyed a great reputation. Goblets, bottles, and glass plates decorated in the Damascan style formed part of the material patrimony of Charles V.¹²⁸ Spanish documents mention glass vases or cups with the epithet *irake* or *iraga*, suggesting glass from Iraq, produced at Kadesia on the Tigrus.¹²⁹

Goat's Blood (*Sanguis Hirco*). An ancient prescription against dysentery and hydropsy (an over-accumulation of serum in the abdomen).

Gold, not to be confused with the dye **auripigmentum**. Damião de Góis speaks of 'gold and silver vases, admirably worked' (*vasos de oiro e prata, admiravelmente trabalhados*) as an export of the Indies; gold thread was also fine woven into silks; gold powder (*oiro em po*) was mentioned by Azurara from 1442, but was also bought at Malacca if provenant from the Sumatran port of Macabó.¹³⁰ Gold was also used in the preparation

¹²³ Francesco di Balducci PEGALOTTI, *La Pratica della Mercatura*, ed. Evans (1936), 360; though, to be fair, after exemplary textual exegesis (of Avicenna and Mathe Selvaticus), M. PASTORE STOCCHI concludes that 'zenzero del cane' was most probably a cheaper false ginger and probably hydropiper (*Polygonum hydropiper*), though also confused with *Polygonum pathifolium*, 'Altre annotazioni', in *Studi sul Boccaccio*, ed. Vittore Branca, v. VII, Firenze: Sansoni, (1973).

¹²⁴ ORTA, *Coloquios dos simples, e drogas he cousas medicinais da India*. ., Ficalho ed. (1895), vol. II, 5.

¹²⁵ Michele SAVONAROLA, *Libreto de tutte le cosse che si magnano; un opera di dietetica del sec. XV*, Almquist Wiskell inter., *Acta Universitatis Stockholmiensis*, 13, Stockholm (1988), 162-165.

¹²⁶ SANTO BRASCA, 'Advice to Pilgrims', (1480), trans. by Aubrey Stewart as *The Wanderings of Santo Brasca and Felix Fabri*, ed. for the Palestine Pilgrims' Text Society, (1892-7).

¹²⁷ as cited by S. de RENZI, *Collectio Salernitana, ossia Documenti inediti, e trattati di medicina appartenenti alla scuola medica salernitana*, Napoli: (1852), t. V, 33.

¹²⁸ *Inventaire du mobilier de Charles V, roi de France*, ed. Jules Labarte, Paris: Impr. nationale, (1879), 240 ff.

¹²⁹ DOZY, Reinhart Pieter Anne & W.H. ENGELMANN, *Glossaire des mots espagnols et portugais dérivés de l'arabe*, Leyden: E.J. Brill, (1869), 287 ss.

¹³⁰ GÓIS, 'Descrição da Espanha' in *Opúsculos Históricos*, Porto (1945), 119; AZURARA is cited by CHALLINOR, *European Expansion* (1979), 120; Duarte BARBOSA, *The Book of Duarte Barbosa*. ., 207. DOI: 10.2870/92585

of 'potable gold', a Paracelsian tonic taken for the prolongation of life, and was relatively common in pharmacopeias of Arab medical derivation, such as the *Antoditarium Nicolai*.¹³¹

Grana or **granum**, a scarlet colorant extracted from the dried bodies of a type of female cochineal scale insect (*Coccus ilicis*), but also variably classified *Kermes ilicis* and *Kermes vermilio* (formerly *Kermococcus vermilius*) and widely acclimatised in southern Europe, across Provence, Languedoc, Spain and into north Africa (*grana di Berberia*); also central Italy and Greece ('Romania'), especially the Peloponnese. Corinth and Patras were great markets, as Hakluyt would concord (*grana di Coronto*). Typically found in the ilex or evergreen oak. The term grana refers to the dried insects' appearance, which could be taken for wheat: Pietro Casola at Corfu in 1497 describes a 'harvest' of grana, as if it were wheat; otherwise, the identification of grana with tiny insects or worms is the source of the word *vermiculum*, or vermilion.¹³² The use of grana disappeared over the 1540s, probably as brazil wood from both sets of Indies flooded the market.¹³³

Grapes, fruit of *Vitis vinifera*, specified in the 1572 Tariffa as 'klein weinbeer aller sort', namely red grapes (*uva passa rossa*) and Dalmatian grapes (*uva schiava*), from Crete (*di Candia*), as well as Aegean varieties (*suciria*, *secia* and *le panto*). Dried, as raisins, thought to be 'good for pains in the bowels, they strengthen the liver and stomach'.¹³⁴

Grease of goat and deer, used in the preparation of plasters.¹³⁵

Guaiacum, Pockhauht or Lignum Guajaci (*Guajacum officinalis*). Gerard suggests that this 'Indian' plant was known as Lignum sanctum 'whereof our bowles and phisicall drinkes are made'; Bright suggests that, together with salsa parilla, used to combat French pocks, or syphilis.¹³⁶ Dürer took some, calling it 'French wood', to combat fever.¹³⁷ At first, physicians nearly suffocated their patients by following the practice of the Indians who used its smoke as a medicinal fumigation. Later pharmacists made a decoction for internal administration by boiling a pound of the wood raspings in ten pints of water. Guaiac acted

¹³¹ edition of 1471, ed. and repr. by Dietlinde GOLTZ, *Mittelalterliche Pharmazie und Medizin: dargestellt an Geschichte und Inhalt des Antidotarium Nicolai; mit einem Nachdruck der Druckfassung von 1471*, Stuttgart: Wiss. Verl.-Ges, (1976).

¹³² Margaret NEWETT ed., *Canon Pietro Casola's Pilgrimage to Jerusalem in the Year 1497*, Manchester (1907).

¹³³ Angela ORLANDI, 'Zucchero e Cocciniglia dal Nuovo Mondo, Due Esempi di precoce diffusione', *Prodotti e Technique d'Oltremare delle Economie Europee, secoli XIII-XVIII*, paper given at XXIX Settimana di Studi, Istituto Internazionale di Storia Economica F. Datini, Prato, (1997).

¹³⁴ *Tacuinum Sanitatis in Medicina Codex Vindobonensis Series Nova 2644 der Österreichischen National Bibliothek* ed. F. Unterkircher, Graz (1967).

¹³⁵ W.I. SCHNEIDER, *Lexicon zur Arzneimittelgeschichte*, 29-30.

¹³⁶ BRIGHT, *A Treatise, wherein is declared the sufficiency of English medicines.* .. (1580), 32; GERARD, *The Third Booke.* .. (1597), 1309.

¹³⁷ A. DÜRER, 'Nuremberg to the Netherlands, 1520-1', in J.G. LINKS (1980), *Travellers in Europe.* .., 117.

as an expectorant, with the reasoning that a patient would spit up the noxious infection in the pints of saliva that were expelled after taking guaiac.¹³⁸

Gum arabic, *Acacia senegal* Willd. etc., growing arid tropical Africa (Hakluyt indicates Zaffo); used for lozenges, gum sweets, adhesives, inks, watercolours and medicine.

Gum seraphic, an aperient.

Gummi Elemei, from *Carium* sp. (check in Mabberley)

Gummi Sandaraca, also known as **Gum Juniper**. Probably the gum of *Callitris quadrivalvis*, a native of North-West Africa, a kind of Juniper tree which when ingested flushes out worms, 'staieth the menses, and haemorrhoides'; otherwise used in the preparation of spirit varnish and pounce. Sandarac is recorded in ancient texts as present in sacred groves, and has been translated as *Tetraclinis articulata* by J. Donald Hughes, who is otherwise confused by the qualifying denomination *citrus* ascribed by Pliny the Elder and other Latin authors.¹³⁹

Gummi Sarcocollae, or gum of bastard wild poppy. Imported from Persia - Pires suggests Arabia Felix - and used in plasters, heals wounds and stops secretions from the eyes.¹⁴⁰

Gypsum, hydrous calcium sulphate, used as a plaster to set bones (the plaster of Paris), to dress land and crops and, as attested by the Italian author Armenini in 1586, used by Dutch painters in admixture with lead white as a pigment. Also used for making the ground coat or preparation layer of panel paintings, particularly in southern Europe.¹⁴¹

Henna, the flower of *Lawsonia inermis*, also known as camphire.

Hermodactylis, a root 'very white within and without, not wrinkled at all, but full and smooth, of a meane hardnes'. Powdered into flour, and used in compound medicines 'against al paines in the ioynts', gout, schiatica etc. Gerard, writing 1597, had not determined which plant this root came from, but citing Valerius Cordus, ascribes it to a 'certaine wilde Saffron' not known to him; it was not to be confused in any case with the white English meadow Saffron.¹⁴²

Honey, an indigenous substitute to sugar, and widely traded across northern and eastern

¹³⁸ Alfred W. CROSBY Jr., 'The Early History of Syphilis: A Reappraisal', in *The Columbian Exchange: Biological Consequences of 1492*, Westport, Connecticut: Greenwood Press, (1973), 122-164.

¹³⁹ GERARD, *The Third Booke* ., (1597), chap. 53; J. Donald HUGHES, 'Europe as Consumer of Exotic Biodiversity: Greek and Roman Times', Table 1.

¹⁴⁰ György ORIENT (1926), 107 mentioned by E. CRIȘAN, *Materia Medica de Transylvanie*, Cluj Napoca (1996), 98.

¹⁴¹ J.A. VAN DE GRAAF, 'The Interpretation of Old Painting recipes', *Burlington Magazine*, 104, (1962), 471-75.

¹⁴² T. BRIGHT, *A Treatise, wherein is declared the sufficiency of English medicines* ., (1580), 15; GERARD, *The First Booke* ., (1597), chap. 82.

Europe, while the honey of Narbonne was imported into the Levant.¹⁴³

Hypericum, the seeds of St. John's woorrt (*Hypericum perforatum L.*). Used in the Dioscoridian tradition against sciatica and against the spitting out of blood from the lungs and bronchi (hemoptysis); used against liver trouble, bilious bladder and as anti-spasmodic.¹⁴⁴

Hypocystis (*Cytinus hypocystis L.*), the hardened juice of Hollie Roses. Considered a 'sure remedie for all infirmities that come of fluxes', a good mixer for treacle and liver and stomach tonics.¹⁴⁵

Incense, a generic for a number of resins concentered from the white, milky sap of certain *Boswellia* species and other resinous plants equally, for example, the Tarinah incense of a brownish colour mentioned by Marco Polo.¹⁴⁶ The southern coastal areas of Arabia Felix, such as the Mahra district, was the land of incense par excellence, but we have reference equally to incenso greschesco, incenso di Romania etc.¹⁴⁷ There were a number of blends made, often from a base of storax liquida and Arabian incense. Used for fumigation, primarily as liturgical accompaniments.

Indian tin, or **calay**, mined in the Malay peninsula and purchaseable at Malacca.¹⁴⁸ Judged by Barros as finer than European tin, calay was an experimental metal sought by European chemists and alchemists and prized for a number of properties, particularly its combustibility.¹⁴⁹

Indigo, also known simply as 'Indisch', marketed in Antwerp as 'Azure, or Indiã colour called of the Portuguese *Anil*'.¹⁵⁰ A dyestuff of that colour and of the same chemical basis as woad, extracted from certain species of the *Indigofera* genus, principally *I. tinctoria L.*, that was a grass 'like rosemary' cultivated in Gujurat, from Sindh to the Gulf of Cambay, and picked when going to seed; challenged by the discovery of abundant

¹⁴³ as we can see from the *Katzenelnbogener Rheinzollerbe, 1479-1584*, in 3 Bde., Veröffentlichungen der Historischen Kommission für Nassau, XXV, Wiesbaden (1981). See also Eva CRANE, *The Archeology of Bee-Keeping*, London (1983). D. ABULAFIA, *L'Economia italiana e le economie mediterranee ed atlantiche*, 16.

¹⁴⁴ GERARD, *The second Booke.*, (1597), ch. 150; MELIUS, *Herbárium*, ed. București (1978). 277; Attila SZABÓ, 'Étude et note à l'herbarium de Melius', in Péter MELIUS, *Herbárium*, București (1978), 424.

¹⁴⁵ GERARD, *The Third Booke.*, (1597), ch. 3.

¹⁴⁶ *Le Livre de M.P.; rédigé en français sous sa dictée en 1298 par Rusticien de Pise*, ed. Pauthier in 2 parts, Paris (1865), 665.

¹⁴⁷ BARBOSA, *Livro de Duarte Barbosa*, 292, b; MASSER, *Relazione di Leonardo da C.M. alla Serenissima Repubblica di Venezia sopra il commercio dei Portoghesi nell'India dopo la scoperta del Capo di Buona Speranza (1497-1506)*, published in *Archivio Storico Italiano*, no. 10, Firenze, (1845), 26.

¹⁴⁸ HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries.*, III, 341.

¹⁴⁹ cited by S.R. DALGADO, *Glossário Luso-asiático*, Coimbra (1919-21), I, 179; Andreas LIBAVIUS, *Commentariorum alchemiae* (1606), pt. II, bk. I, ch. 8.

¹⁵⁰ L. GUICCIARDINI, *A Description of the Low Countreys.*, 38v.

supplies at the end of the 1550s in Spanish America.¹⁵¹ On the medieval market, Persian and Egyptian varieties nestled alongside 'Baghdad indigo', which a Catalan buyer in 1385 declared was 'the best of all'. Shipped and marketed in the form of cubes, or small cakes, from which sprang the misunderstanding amongst purchasers that they were handling a mineral rather than plant product.¹⁵² A strong signifier of luxury, indigo played an important role next to dyeing in the paintings of the Italian *Quattrocento*. Challenged by several false indigos derived from mulberries and blueberries.

Ireos Florentinae, the root of *Iris Florentina L.*, Flower de-luce of Florence, widely available for making 'sweete waters, powders and such like', used widely in cosmetics (e.g., toothpaste) and pharmacologically as an expectorant, emetic and catarrhic.¹⁵³ The oil of white lilies was used against 'malignant fever' in the case of the Tuscan plague epidemics of the seventeenth century.¹⁵⁴

Ivory of African elephant, known as Elephant's Tooth or Dente d'Abolio, from Mozambique and Melinde, sold as shavings (*rasura*), in Pegalotti's time, at the markets of Alexandria, Acre and Famagusta. Considered an astringent and coolant, but also decorative.¹⁵⁵

Ivy (*Hedera helix*), whose gum was used to kill nits and lice and as a depilator.

Juniper Berries, made into a widespread drink in Bohemia guaranteeing 'woonderfull good health'; as a decoction against the cough and 'against poysons and pestilent feuers'.¹⁵⁶

Kermes (from which derives the word crimson). Also known as *cocole*, a lively red colorant or dye extracted from the dried body of a type of asiatic scale insect, *Porphyrophora hameli* or *polonica*, more commonly classified these days as *Margarodes polonicus*. Traditionally exported as a 'Pontic good' from Armenia, kermes appears in Europe from the late fourteenth century, where it was also sold by German and Polish merchants at the Fondacho dei Tedeschi.¹⁵⁷ Widely confused with grana, it would have been - in Luca Molà's analysis - kermes which Matthew of Miechow suggests 'abundant tota terra Russiae' and was widely traded by the Genoese via their Crimean colonies until

¹⁵¹ ORTA, *Coloquios dos simples, e drogas he cousas medicinais da India.*., I, 86; HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries.*., v, III, 342; *Viagem de Pyrard de Laval*, v, II, ch. VI, 308. On Spanish indigo (*añil*), see E. Lorenzo SANZ, *Comercio de España con América en la época de Filipe II*, t. I 'Los mercadores y el tráfico indiano', Valladolid (1979), 589-92.

¹⁵² D. ABULAFIA, 'I prodotti industriali: il Medioevo', paper circulated at *Prodotti e Tecniche d'Oltremare delle Economie Europee, secoli XIII-XVIII*, XXIX Settimana di Studio, Prato, 14-19 April, 1997, 5.

¹⁵³ GERARD, *First Booke.*., ch. 35; PANȚU, *Plantele conosciute.*., 231; COICIU & RÁCZ, *Plante medicinale și aromatice*, București (1962), 349-51.

¹⁵⁴ Carlo CIPOLLA, *Fighting the Plague in Seventeenth Century Italy*, Wisconsin (1981), 109, footnote #47.

¹⁵⁵ W.I. SCHNEIDER, *Lexicon zur Arzneimitttelgeschichte*, Frankfurt am Main, (1968), 35-36.

¹⁵⁶ GERARD, *The Third Booke.*., (1597), chap. 53.

¹⁵⁷ M. LOMBARDO (Caffa), 'La figura della seta mongola', *Annali*, no. 100, (1950), 100-101. Halikowka, China, Sicilian Caffa, Portugal and the European spice trade, 1490-1500

their downfall.¹⁵⁸ Kermes was also known as the 'Polish berry', for the roots of a small plant (*Scleranthus perennis*) cultivated in central and Eastern Europe; but the *hameli* species' habitat is rather that of the wild grasslands of the Caucasus, Anatolia and Persia. Heyd doesn't believe that kermes was distinct from grana, but *l'Arte della Seta in Firenze* (beginning XVth century) suggests that *chermisi* sold at a much higher price (as much as twice) than *grana*; it was the most expensive of the red pigments and 'was synonymous with princely luxury, heir to the ancient Roman and Byzantine purple'.¹⁵⁹

Lacre, Laccha, lac or shellac. It seems that this was an insect resin secreted (or the vegetal reaction to the sting) provoked by any of the subfamily *Lacciferinae*, such as *Kerria lacca* (*Kerria chinensis*), but especially *Laccifer* (*Coccus*) *lacca* on *Butea monosperma*, *Cajanus cajan*, *Ficus religiosa*, *Schleichera oleosa* & *Ziziphus mauritiana*.¹⁶⁰ Pegalotti suggests it was available as *lacca cotta* and *lacca cruda*.¹⁶¹ The resin was used as a sealing wax used for letters and official correspondance, and was collected in Diu, Malabar, Bengal, Pegu, 'Balagvate', Sumatra and elsewhere, including Africa (*cera berberisca*), where the insects typically infested teaks, acacias and ficus.¹⁶² Lacre was thus often recorded as wax (*cera*) in primary documentation, but given its reddish hue, was also used as a dyestuff (indeed to Bartels, lac's primary qualities are those of a *Farbstoff*). Otherwise, the Countess of Leicester's account book is suggestive of the large quantities of wax that were needed in a medieval household, if not for sealing correspondance and acting as some sort of authentication, then for domestic lighting and religious services.¹⁶³

La(b)danum, an aromatic gum secretion from the leaves of the rockrose plant *Cistus ladanifer* L., growing across the Mediterranean, and in Cyprus and Crete particularly (other sources cite Syria and Arabia). Used in plasters and against bronchial illnesses; further 'being anointed on the head with oyl of Myrtles, it strengthens the skin, and keeps hair from falling off'; its scent is used equally in scenting soaps and deodorants.¹⁶⁴ Same, if slight, qualities as opium; the Scottish poet James Thomson (1834-82) killed

¹⁵⁸ M. MIECHOWSKI, *Sarmatia asiana atque europea*, in PISTORIUS, *Corpus historiae polonicae*, Basel (1582), I, 141. For the confusions with grana, see Dominique CARDON, 'Le vers du rouge. Essai d'entomologie historique', *Cahiers d'Histoire et de Philosophie de Sciences*, n.s. 28 (1990), 1-178; John H. MUNRO, 'The Medieval Scarlet and the Economics of Sartorial Splendour', in *Cloth and Clothing in Medieval Europe. Essays in Memory of Prof. E.M. Carus-Wilson*, ed. N.B. Harte & K.G. Ponting, London (1983), 13-70. The most available synthesis is Luca MOLÀ, *The silk industry of Renaissance Venice*, Baltimore: Johns Hopkins University Press, (2000), 108-.

¹⁵⁹ Wilhelm HEYD, *Histoire du commerce du Levant au Moyen Âge*, 608-9; M.G. GARGIOLLI, *l'Arte della Seta in Firenze*, (1868); L. MOLÀ, *The silk industry of Renaissance Venice*, Baltimore: Johns Hopkins University Press, (2000), 111.

¹⁶⁰ MABBERLEY, *The Plant-Book. A portable dictionary of the higher plants*, (1986), 311.

¹⁶¹ Francesco di Balducci PEGALOTTI, *La Pratica della Mercatura*, ed. (1936), 297.

¹⁶² ORTA, *Coloquios dos simples, e drogas he cousas medicinaes da India*. ., II, 29 ff.

¹⁶³ Margaret Wade LABARGE, 'The Spice Account', 37-.

¹⁶⁴ Thomas BLOUNT, *Glossographia* (1656), @23477543 in Early Modern Dictionaries Database (EMEDD), ed. Ian Lancashire, Oct. 15, 1999, <http://www.utoronto.ca/english/emedd>.

himself with laudanum 'so as to drug disappointment'.¹⁶⁵

Lapis Aetitaes (probably also Haematites), mentioned in Braşov inventory of 1576. Probably the lapis haematidis, or bloodstone, used as an anti-haemorrhagic and imported from Germany?

Lapis Hyacinthi Orientalis, or *jaçintos* (Pg.). Amethyst of various colours (Brasov, 1576), typically found in Ceylon.

Lapis Judaicus (probably Zudassi) & Lyncis, a chalk stone of petrified fossils, if recent then likely to be aragonite, otherwise calcite, from 'Zaffetto'.

Lapis lazuli (lazzudis), a bright ultramarine blue semi-precious stone from the Orient, commonly Persia and Armenia, and most famously the ancient quarries at Badakshan, in what is now Afghanistan, described by Marco Polo.¹⁶⁶ Venice continued to dominate distribution - Nicholas Hilliard, the sixteenth-century miniaturist, remarked upon the 'ultermarine of Venice'.¹⁶⁷ Ground up to make ultramarine paint, a greatly prized colour and hallmark of the Renaissance Italian style in painting.¹⁶⁸ In north European countries, the mineral was less common. Boltz in his *Illuminirbuch* remarked that lazuli was seldom seen in Germany, and Dürer was put off by its expense.¹⁶⁹

Lapis magnetis, lode-stone (iron oxide).

Lapis xalaminaris, a carbonate of zinc (Sibiu, 1580).

Laqueca (Alequeca); today called limodra. Found at a place called Limadura in Gujurat. It had the power to stop the flow of blood.¹⁷⁰

Latton, from China, 'a fine kind of brasse' (1599).

Lemons (*Citrus limon, medica L.*), of which the peel was used to combat poisoning and bites; melancholy more generally and good for the flow of bile.¹⁷¹ Typically imported

¹⁶⁵ <http://www.nazark.org/na01006.html>; Virginia WOOLF, *A Room of One's Own*, London (1928), 106.

¹⁶⁶ *The Most Noble and Famous Travels of Marco Polo*, London (1937), trans. J. Frampton and N.M. Penzer, 58.

¹⁶⁷ Nicholas HILLIARD, *A Treatise concerning the Arte of Limning*, ed. P. Norman (1912), in *The Journal of the Walpole Society*, 1, (1912), 33.

¹⁶⁸ W. HEYD, *Histoire du commerce du Levant au Moyen Âge*, (1967), vol. 2, 653-54; see Daniel V. THOMPSON, *The Materials and Methods of Medieval Painting*, New York (1936).

¹⁶⁹ A. DÜRER, *Schriflicher Nachlass*, vol. I, Rupprich ed., Berlin (1956), letter no. 19, 73.

¹⁷⁰ ORTA, *Coloquios dos simples, e drogas he cousas mediçinais da India*. ., II, 222 and 230. Check. Entry as 'Limadura d'oro puro' in *(Il) Dispensario di Valerio Cordo. Opera à Speciali necessaria per comporre i Medicamenti, e conoscere i semplici: Con la dichiarazione che gli accomoda alle Infermità*, Venezia: Moretti (1590).

¹⁷¹ MELIUS, *Herbárium*, 129; *Tacuinum Sanitatis in Medicina Codex Vindobonensis Series Nova 2644 der Österreichischen National Bibliothek* ed. F. Unterkircher, Graz (1967).

from Zante and Cephalonia, though at Bruges, Pero Tafur observed lemons of Castile.¹⁷²

Lignum aloes. It was from *Aquilaria malaccensis* (Jean Baptiste Lamarck, 1744-1829), also known as *Aquilaria agallocha* Roxb., colloquially aloewood, calambac, eaglewood or lign-aloes, that this most precious of drugs stemmed. A product of the East Indies, principally Cambodia (but also Assam and the right bank of the Brahmaputra), Java and Sumatra, aloe was derived from the decaying heartwood saturated with a concentrated resin buried in wet ground and allowed to rot a little.¹⁷³ This resin formed the basis of incense, which, when distilled, was used in scent, as a colorant and in medicine. Dioscorides speaks of such a resin, though it was the Arabs who introduced lignum-aloes into materia medica.¹⁷⁴ Tended to be used medicinally as a cathartic (relief of tension), but also for diseases of the head; other sources suggest the resin was used for disinfecting (wounds) and as a laxative.¹⁷⁵ Lignum aloes was treated as one of the most exclusive woods used in carpentry.¹⁷⁶

Lime flowers, used against colic and dysentery. Used externally against burns.¹⁷⁷

Linen. Widely produced in Europe, though higher quality fabric, produced in fine, threaded cloth, was Egyptian (from the Nile delta, north of Cairo), exported via Alexandria.

Linseed oil, extracted from the seeds of *Linum usitatissimum*, today a drying oil used in food-processing, paints, varnish, printing inks, water-proofing, soaps etc. Seems to have been chiefly a Mediterranean crop, though common enough in Transylvania too (*lenmag olaj*).¹⁷⁸

Liquorice, probably the ‘Sugo di Requillicie’ Hakluyt refers to, both the root and the juice of *Glycyrrhiza glabra* L., apparently growing indigenously but imported equally from *Arabia Felix*. Used against the ‘rough harshnes of the throte and brest’, laid on wounds and for relief of the stomach, and ‘a singular good remedy for a pin and a web of the eie’; similarly, thought to ‘open constipation of the alimentary ways and of the

¹⁷² *Pero Tafur: travels and adventures*, trans. & ed. M. LETTS, London (1926), 56.

¹⁷³ these are HEYD’s estimations of provenance. HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries*, v. III, 342 prefers Cochin, China and Malacca.

¹⁷⁴ DIOSCORIDES, *De materia medica*, facsimile published by the Akademische Druck und Verlaganstalt, Graz, (1965-70), vol. 3, 22; see also ISIDORE OF SEVILLE, *Etyimologirum*, trans. in 2 vol. bilingual edition as *Etimologias*, ed. José Oroz Reta & Manuel A. Marcos Casqyero, Madrid, BAC (1983), 17.8, 9, 28.

¹⁷⁵ *Secreta secretorum*, (1681) repr. London (1894), 55; E. CRIŞAN, *Materia Medica de Transylvanie*, 74.

¹⁷⁶ *Inventaire du mobilier de Charles V, roi de France*, ed. Jules Labarte, Paris: Impr. nationale, (1879), 233 ff.

¹⁷⁷ MELIUS, *Herbárium*, 147.

¹⁷⁸ ‘Bornemissza gazdasági naplói (1667-1690)’, Béla SZÁDECZKY ed., *Apafi Mihály fejedelem udvartartása*, Budapest (1911), vol. 1.

reins'.¹⁷⁹ The juice of liquorice, together with ginger and other spices, was made into ginger bread, sold by apothecaries against the cough and other infirmities of the lungs and chest. The root was both decocted and finely powdered.¹⁸⁰

Litharge, or Lithargyrum (see under **White Lead**).

Long Pepper, fruit of the shrub *Piper longum* L. and, after the nineteenth century classification, allied species known variously as *Chavica Roxburghii* Miq. Miquel, *Chavica officinarum* and *Piper officinarum* CDC.¹⁸¹ According to Matthew (124), it was considered an item of luxury, though by the nineteenth century it had long been neglected outside traditional Indian medicine and only the Dutch were reputed to import it. Hakluyt suggested it was exported from Bengal and Malacca; Hobson-Jobson suggests it was more widespread. The tiny black fruits are accredited with a distinctively strong, but sweet taste. According to the Tariffa of 1572, the fruits were traded as 'dimestigo' and 'salvadigo', perhaps to be understood as an opposition between cleaned and rough; other pharmacopeias distinguish between 'album' and 'negrum'.

Mace, the outer frond-like covering, or aril of the nutmeg *Myristica fragrans*, (q.v.). Commended against 'the spitting of blood and bloody fluxes'; against poor digestion due to a preponderance of cold humours, such as stomach aches caused by phlegm; prepared as an oil, mace was thought to offer general relief for the stomach, the heart, womb and nervous agitation and hydropsy of the brain.¹⁸²

Madder (*Rubia tinctorum*). The basic indigenous European pigment for the colour red, and which was cultivated especially intensively in Holland and France.

Malabathrum, or the **Indian Leaf**. Reputed to grow in Arabia and Cambay; used to warm and comfort the stomach, against sore eyes and kept moths and other insects away from clothes stored away.¹⁸³ Duarte Barbosa, and the author of the Sommario, thought Folio Indio to be little more than the leaf of the climbing pepper, betel. This was a long-standing fallacy that we find going back to Simon Januensis and the dictionary of medicine and botany entitled *Clavis sanationis*, though Orta reminds us that Avicenna treated Folium indii and betel separately. At the same time, a botanical investigation of the time ascertained that the *Folium Indii* of the medieval pharmacopeia, and a standard constituent of the theriac compound, was in fact the leaves of a certain vulgar species of cinnamon, after Royle held to be the *Cinnamomum tamala* and *C. albiflorum*, widely used as a stimulant across southern Asia and commonly found at Goa or Cochin.¹⁸⁴

¹⁷⁹ *Tacuinum Sanitatis in Medicina Codex Vindobonensis Series Nova 2644 der Österreichischen Nationalbibliothek*.

¹⁸⁰ GERARD, *The Historie of Plants*, London (1597), 1120.

¹⁸¹ the first is in *Treasury of Botany* (1866); the last is from HOBSON-JOBSON (1994 repr.).

¹⁸² John FITZHERBERT, *Booke of Husbandrie*, London (1598), 127; ORTA, *Coloquios dos simples, e drogas he cousas medicinaes da India*. ., 36.

¹⁸³ GERARD, *The Historie of Plants*, II, ch. 143.

¹⁸⁴ Garcia D'ORTA, B. Clus., 175-178; Amatus LUSITANUS, *In Dioscorides Anazarbei de medica materia libri quinque enarrationes* (1553), 23.
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Malachite, *verde azzurro*, or green *chrysocola*, a basic carbonate of copper mined in Hungary and elsewhere but also, according to Agricola, washed 'from ancient tunnels' and deposited as a sediment in lakes at Neusohl in the Carpathians.¹⁸⁵ Malachite served as a pigment in both egg tempera and oil medium.

Malagueta, so-called 'wegen seines vielen Saamens', or **Grains of Paradise**, seeds embedded in the russet coloured fig-like fruit of *Aframomum meleguet(t)a* (*Roscoe*) *Schumann*, of the Zingiberaceae family. Grew in West Africa along the Grain Coast, between Liberia and Cape Palmas. Primarily culinary application, in the spiced wine hippocras, for example. Considered 'hoote and moyst' and praised consequently as 'good for the stomake and the head', but also tooth-ache thought to have been provoked by phlegm affecting the gums.¹⁸⁶

Manna. Various edible materials, some of plant origin and usually sweet, often exudations following insect attack, like honeydew but set hard. The precise identification of manna in accordance with classical description remained a frustrated botanical objective of the first half of the sixteenth century. Modern commercial sources include *Fraxinus ornus* or manna ash, and it is also collected from certain Tamarix species, especially *T. mannifera* that is found from Iran to Arabia, Hammada salicornica, Larix decidua etc. Panțu (175) suggests it was used as a purgative especially for children.

Marking nut, fruits of *Semecarpus anarcadium*. Taken from the East Indies; used as a skin stimulant (*Hautreizmittel*) and technically, the unripe fruit, when mixed with lime, provides a black resinous sap used as an ink or dye on linen; the green fruit can be used in bird-lime and in tanning etc.

Massicot, *Bleigelb* or *giallolino*, 'yeallowe of the Flaunders fornace and of Almany', a lead-tin oxide formed from calcination and used as an opacifier for glass and in ceramic glazes, and as a yellow pigment in the paintings of the Old Masters.¹⁸⁷

Mastic (*Pistacia lentiscus*, L.). A resin from the lentisk plant widely imported from the eastern Mediterranean during the Middle Ages, but associated particularly with the Greek isle of Chios, and used for chewing since the time of Theophrastus. Thus it was considered generally a tonic, and specifically useful in quelling halitosis and as a filler for caries (M). But it was also widely employed as a treatment for diarrhea and as a specific against cholera. In the artistic realm, used for varnishes, especially oil-pictures. Available in pharmacies as white (*albi*) and red (*rubri*).

Mella, from Romania. According to Estes, this was 'a mixture of active drug ingredient(s)

¹⁸⁵ AGRICOLA, *De Natura Fossilium*, 215, as cited in footnote #15 of Hoover and Hoover's translation of the same author's *De Re Metallica*, New York, (1950), 584.

¹⁸⁶ BAUHINUS, *Neu vollkommen Krauterbuch. Mit schoenen und kuenstlichen Figuren*. . . , Basileus (1672), 1319; J. RUSSELL, *Bk. Nurture*, (1460), 126; BORDE, *Dyetary* (1542), re-printed by Early English Text Society, (1870).

¹⁸⁷ R. HAYDOCKE, *A Tracte Containing the Artes of Curious Paintings, Carvinge & Buildinge*, Oxford (1598).

with honey'.¹⁸⁸

Minium, mennig, or red lead, most famously from Vetrivius. The Greeks confused this with cinnabar; both were used in the manufacture of the artist's pigment, vermilion.

Mirabolans (Myrobalans), also Fabia Syriaca. A small, plum-shaped seeded fruit 'good to be eaten. . . and sweet in taste' from certain species of *Terminalia* tree: the Lüneburger and Nürnberger Inventar record mirabolani citri(ni) from *T. citrina*, m. (negri vel) chebuli and m. Indi(-ci) as the ripe and unripe fruits of *T. chebula* (*Gaertner*) *Retz.* and the gourd shaped m. bellarica from *T. bellirica*, (*Gaertner*) *Roxb.* Mirobolani emblica are the round fruit from *Phyllanthus emblica*. Portuguese commentators refer to the mirabolan as growing wild on 'a great tree cal[-]led also Lotos' and found widely in the jungles of Malabar, Dabul, Cambay, Vijayanagar, the Deccan.¹⁸⁹ They were exported dried or in conserve (Pliny refers to myrobalanum nuts) and took their place in the European pharmacopie tradition from the time of Constantinus Africanus (Opp. I, 345) and the Salernitan school. They were used as a digestive and, possibly, eaten as a dessert fruit. Maberley suggests the dried fruit were used in tanning, the high tannin content (32%) giving a soft, mellow leather.¹⁹⁰ Bartels contends that they were used until the nineteenth century as a mild laxative (71, §50).

Mummy. Mostly embalming fluid of human corpses, principally asphalt (Pegalotti) or pitch. An ancient recipe of Egyptian mummies (*mumia vera*) that arrived in Europe through the Arab pharmacopeia and from where the valuable exhumations continued to be imported, there was a lively but illicit trade in the bodies of recently deceased. Used as a constituent in plasters and in the purification of the blood; more generally associated with the universal healing remedy, its weight was considered equivalent to that of gold.¹⁹¹

Musk, or almíscar in Pg. Odorous secretions excised from the prepuce glands of the male *almiscareiro* (*Moschus moschiferus* L.) and from the perineum of a number of mountain goats of the *Viverridae* family, especially the *Viverra zibetha* L. of the southern Asia highlands, brought to Malabar by sea from the north-west part of China, Tibet and Pegu.¹⁹² There was also the *Civettictus civetta* Schreb. of Africa, more commonly known as *gato-de-algália* (or *lagaia*) from which the perfume known as *algália* was procured and

¹⁸⁸ HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries.* ., v. III, 343; F.A. FLÜCKIGER & D. HANBURY, *Pharmacographia.* ., London 1879 ed., 161-63; WORTH ESTES, J. *Dictionary of Protopharmacology. Therapeutic Practices, 1700-1850*, (1990), 127.

¹⁸⁹ T. PIRES, *The Suma Oriental*, 83 and ORTA, *Coloquios dos simples, e drogas he cousas medicinais da India.* ., v. II, 154. Thomas THOMAS, *Dictionarium Linguae Latinae et Anglicanae* (1587). BARTELS, *Drogenhandel und apothekenrechtliche Beziehungen zwischen Venedig und Nürnberg*, 71, §50 thinks that the *mirabolanum* fruit was also yielded by Euphorbiaceae growing in the East Indies.

¹⁹⁰ MABBERLEY, *The Plant-Book. A portable dictionary of the higher plants*, 573.

¹⁹¹ K. MEIER. in *Sudhoff's Archiv für Geschichte der Medizin und der Wissenschaften*, Wiesbaden: Franz Steiner Vrlg. 30, (1937/1938), 62-69; SCHNEIDER, *Lexicon zur Arzneimittelgeschichte*, Frankfurt am Main (1968), 53-54.

¹⁹² ORTA, *Coloquios dos simples, e drogas he cousas medicinais da India.* ., II, 42 and *Cartas de Affonso de Albuquerque*, (1884-98), I, 125, and *Roteiro que em descobrimento da Índia pelo Cabo da Boa Esperança fez em 1497*, Porto: (1838), 89.

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whose trade had been leased out by the Portuguese even under the reign of Afonso V.¹⁹³ This was a trade, however, often little understood by travellers of the period, who ascribed the musk to boils produced on the flanks of gazelles as a result of 'the superfluity of blood'.¹⁹⁴ But *algália* was also common across Asia, and particularly in India.¹⁹⁵ The perfume was sold either in powder made from the dried secretion or indeed as retained in their umbellical sacks. *Algália* was used in western medicine and to treat horses; musk was used against weak hearts, to cure children of colic, and against impotence (*Ohnmachten*) and, according to Shakespeare's *King Lear*, 'to sweeten the imagination'.¹⁹⁶

Mustard. Boccaccio mentions 'tall mustard.. which is unfriendly to the nose but useful for clearing the head'.¹⁹⁷

Myrrh, a brownish-yellow oleo-resin exuded by *Commiphora myrrha*, it was brought to the Malabar coast and especially Cambay from Arabia, but also from the lands of eastern Africa, and from there was exported to Portugal.¹⁹⁸ Used as an odorific, but also as a tonic and an antispasmodic.

Nard. Unclear whether the plant known as Indian nard (*anarcado*, Pg., *nardum* Lat.) is a different plant from spikenard. One source suggested that many different varieties of this latter plant exist, some of which later flourished in the West Indies; Maberley counter-asserts that there is only one species of *Nardostachys*. Nard, of which the spikes and leaves prized for their scent, may be *Nardus stricta* L. or mat grass indigenous to western Asia, and growing on drier moors and poor grazing. It should be possible to confirm this hypothesis by matching the historical illustration on p.62, C.G.E.R. with an image of mat grass in the *Index Londiniensis*. Riddle insinuates that a Gallic nard existed as a substitute; in Roman times it was the *Valeriana Dioscoridii* of Thrace.¹⁹⁹ The only covering explanation here can be that the *Nardostachys* genus was very close to that of *Patrinia* within the Valerian family, of which 15 species exist in Europe.²⁰⁰

Nigella (*Nigella sativa* L.), of which the seeds, particularly when drunk with wine, a tested diuretic, intensifying lactation and the provoking the menses. Used to flush out worms and to drive out catarrhs and colds. Not sure if it was imported, or whether it had

¹⁹³ see Chanc. de Afonso V, L. 21, fl. 56.

¹⁹⁴ Andreas von Harff, *The Pilgrimage of A. v. Harff*., repr. (1967), 179.

¹⁹⁵ *Viagem de Pyrard de Laval*, v. II, ch. VI, 309.

¹⁹⁶ ORTA, *Colóquios dos simples, e drogas he cousas mediçinaes da India*., Goa (1563), ed. Ficalho, Lisbon (1895), I, 70-71; António NUNES, 'Livro dos pesos, medidos e moedas' (1554), in *Subsídios para a história da Índia Portuguesa*, ed. R.J. de Lima Felner, Academia real das Sciencias, Lisbon (1868), 14.

¹⁹⁷ Giovanni BOCCACCIO, *Comedia delle ninfe fiorentine*, Milan (1964), 745.

¹⁹⁸ Nycolão GOMÇALLVEZ, *Livro que trata das cousas da India e do Japão*, 55-56.

¹⁹⁹ RIDDLE, John M. 'The Introduction and Use of Eastern Drugs in the Early Middle Ages', *Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften*, 49, (1965), 193, footnote 5; PLINY, *Historia Naturalis*, lib. XXVI, vol. IV; letter of Tomé Pires to D. Manuel from Cochin on 27 January 1516, A.N.T.T., C.C., pte. I, m. 19, no. 102.

²⁰⁰ MABBERLEY, *The Plant-Book. A portable dictionary of the higher plants*, 390. Halikowski Smith, Stefan (2001), Portugal and the European spice tradé, 1480-1580 European University Institute

been domesticated as Gerard would suggest.²⁰¹

Nutmeg, the seed contained within the fruit of *Myristica fragrans* Houtt. Used as a fumigant, for good breath, against cold stomachs and livers, bad digestion, particularly due to flatulence, and against sea-sickness; closes the stomach and halts diarrhoea; their hot properties thought to strengthen sight and the brain (the intellect) and memory; used against facial blemishes, such as moles.²⁰² Considered in certain quarters as a cure against bubonic plague. They are products of the Banda islands.²⁰³ Also traded the flowers (*Muskatenblumen*).

Occuli Cancrorum, concretions in the stomach of the sweet-water crayfish; a constituent of certain powders, classically recommended against rabies, consumption, bladder stones and cancer.²⁰⁴

Olives, fruit of Mediterranean growing *Olea europaea*, commonly that of Seville.

Olive oil, extracted from fruit of *Olea europaea*. Often indicated in German sources as *venedisch Öl*, though largely produced in Apulia specifically for export.²⁰⁵ Thought to 'mollify the belly' and kill worms and good for nutrition by 'strengthening the stomach and gums'.²⁰⁶ Considered by the editors of the Transylvanian *Értelmező kéziszótár* as worthless, bad-quality wood oil, used rather for medical and healing purposes.²⁰⁷

Onions.

Op(p)opanax, 'a yellow gummie iuice' of *Opopanax Chironium*, though there is some confusion whether this should be Chiron's or Hercules Alheale. Although Mathioli confirmed that the plant grew in several parts of Italy, the Venetian 'liquor' of the same name was taken from Alexandria, Syria, Persia and Greek Arcadia.²⁰⁸

Opium, a concreted syrup of dried latex obtained by lancing the immature fruit capsules of *Papaver somniferum* Linn, common across the Orient - imported by the Portuguese from Cambay - and particularly good, Bright tells us, from Apulia. A powerful and addictive drug, containing around 25 different alkaloids especially morphine (9-17%), used as an analgesic, narcotic as well as a poison for those seeking to commit suicide and, as

²⁰¹ MELIUS, *Herbárium*, 197 & GERARD, *The Second Booke*. ., ch. 427.

²⁰² ORTA, *Coloquios dos simples, e drogas he cousas mediçinaes da India*. ., (1895) ed., II, 81 ff.

²⁰³ ORTA, *Coloquios dos simples, e drogas he cousas mediçinaes da India*. ., 1895 ed., II, 81 ff.

²⁰⁴ SCHNEIDER, W. I., *Lexicon zur Arzneimittelgeschichte*, 25.

²⁰⁵ BARTELS, *Drogenhandel und apothekenrechtliche Beziehungen zwischen Venedig und Nürnberg*, 73, §76.

²⁰⁶ *Tacuinum Sanitatis in Medicina Codex Vindobonensis*. . .

²⁰⁷ Emese BÁLINT, *Transylvanian Spices in 1595*, n.d. Central European University, Budapest, 2000. 2.

²⁰⁸ GERARD, *The Second Booke*. ., 851; HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries*. ., v. III, 342.

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we are informed by Cesare de Fedrici, a way of prolonging the sexual act.²⁰⁹ Pharmacopeias divided the product into Opium thebaicum (from Egyptian Thebes), tranense, oppimiconium ('miconis') and quirinacium.

Orchil, see Archil.

Orpiment or **Auripigmentum**, a compound (a naturally occurring sulphur) of arsenic formerly used as a yellow dye, known as 'King's yellow' in pharmacy and an artists' pigment; imported from 'manie places in Turkie'.²¹⁰

Ossa de Corde Cervi, the vertical bone of the deer's heart. Used as a common antidote to poison, also as an anti-epileptic and heart tonic.²¹¹

Paper. Abulafia uses the example of the twelfth century Genoese notary, Giovanni Scriba, to demonstrate the Ashtor thesis: luxury goods that had once been imported into Europe from the Levant came to be substituted by local manufactures which, by the end of the Middle Ages, were being actively exported into the Levant. Thus it was that while Scriba wrote his acts on paper imported from Alexandria, by the fifteenth century paper of Fabriano was being imported into the Levant.²¹²

Parsley.

Pearls, or *margaritarum orientales*, produced by *Mytilus margaritiferum L.*, fished from offshore Ceylon, Cochin China (Hainan) and in the Red Sea (Dahlak) and Persian Gulf (Bahrain). Pires suggested the whitest pearls came from China, the best from Ceylon (fished from Cail, in the Ceylonese straits) and the roundest from Bahrein. Often refined and pierced in the cities of the Middle East. Those of the Persian Gulf were probably the most common in Europe, though the inventory of Charles V suggests pearls came even from Scotland!²¹³ Used in *compositae* such as *Confectio Diamargaritarum*, *Elect. de gemmis*, *Conf. Cordialis*, *Pulv. epilepticus*, *Pulv. contra abortum* etc.²¹⁴ There was a large trade in pearls across Venice.²¹⁵ Mother-of-pearl was widely incorporated into furniture, such as in trunks (*cofres de nacar y bentalles de todos*), while seed-pearls (*aljofar*) were often set together with gems, as recorded in the Spanish *Memoria de las Mercaderías que entran en el Reyno*. .

Pepper (*Piper nigrum*). Picked as unripe green berries from the vine, which are then

²⁰⁹ RAMUSIO, *Navigazioni e Viaggi*. ., t. III, ff. 394v-5 & 396v.

²¹⁰ HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries*. ., v. III, 343; see British Library, Egerton 747 ms., fol. 9 for detail.

²¹¹ W.I. SCHNEIDER, *Lexicon zur Arzneimittelgeschichte*, 55.

²¹² David ABULAFIA, *L'Economia italiana e le economie mediterranee ed atlantiche*. ., 16.

²¹³ in *Revue archéologique* (1850), 55, 507.

²¹⁴ SCHNEIDER, *Lexicon zur Arzneimittelgeschichte*, 50. PIRES, *The Suma Oriental*, App. 1, 517. HAKLUYT suggests pearls were from Balagvate. Where is this?

²¹⁵ see the chapter devoted to pearls in the 'Welthandelsgebräuche' of the Paumgartner, ed. K.O. Müller, *Welthandelsgebräuche (1480-1540)*. ., V, 33-34.

fermented after being left in the sun for up to a fortnight to dry and blacken. Pepper was also grown in Canara and extensively in the Indonesian archipelago, in Java, Sumatra and Sunda, as well as around Malacca on the Malay peninsula, but even if it was 'larger and fairer', the Malabar pepper was considered better and 'stronger', and was thus the standard Portuguese export, even if it cost more.²¹⁶ Black pepper constituted the major share, as much as 85%, of Portuguese exports from Malabar.

Used as an astringent (causes contraction of body tissue) in such cases as dead skin on a wound; an anti-haemorrhagic; considered by Theophrastus an antidote; opens the respiratory canals by dispersing phlegm; good for suscitng appetite and digestion by way of warming the stomach, dissipating windiness; used against the diseases of the breast, proceeding of cold such as the Ague; an aphrodisiac and stimulant, as well to produce more copious sperm; as a sternutatory, pepper was thought to purge the brain and chase out epilepsy etc. Saint Hildegard, the virtuous Benedictine of the XII, considered pepper 'a panacea, albeit with the condition that it be used moderately, since it renders men lascivious and leaves the women without defense' (INAPA, 238). As a compound, honey and pepper was considered a treatment for worms (Keith Thomas, 212).

Pilatiro, from Barbary.

Pine resin, extracted from *Pinus silvestris* and other species of pine and which was used to treat skin complaints and applied as a plaster for rheumatics.

Pistachio, seeds (*nuclei*) of *Pistacia vera*, grown widely across the Mediterranean and Near East (Hakluyt recommended Doria) with a similar usage to almonds (blood cleanser; stomach settler).²¹⁷

Plantain (*Plantago lanceolata* L.), recorded in Latin inventories as Lingva Ovis. Seeds used for their bitter and astringent properties.²¹⁸

Plums, both *Pflaumen* and *Zwetschen* (damsons). Prunes were a widely exported French product.

Plumes, or *penacchi*, bought by the Venetians at Alexandria.

Polish berry, *Porphyrophora Frischii* Brandt. Is this merely a re-classification, or are there other species that qualify, such as *Margarodes polonicus*, formerly *Porphyrophora polonica*. 'Gorma color est, qui trahit in purpuram et affertur de quadam regione quae Rosia dicitur'.²¹⁹ Often confused for grana, as for example by Matthew of Miechow, who suggested that the dye 'abundat tota terra Russiae' and was widely traded by the

²¹⁶ Garcia da ORTA, *Coloquios dos Simples e Drogas da India*, ed. Conde de Ficalho, Lisbon (1895), vol. II, 141. PIRES suggests the pepper of Sumatra was 'nem he da bomdade da de cochim he moõr mais vãa dura menos nom tem a perfeicam do gosto E nom he tanto aRomatico', *The Suma Oriental* (1944 ed.), vol. 2, 398. Also BARBOSA, *The Book of Duarte Barbosa*, ed. 1918, 'Of Pepper', vol. II, 227-.

²¹⁷ H.A. HOPPE, *Drogenkunde*, 300; MELIUS, *Herbárium*, 144.

²¹⁸ PANȚU, 208.

²¹⁹ *Lib. divers. art. Montpellier*, 756.

Genoese via their Crimean colonies until their downfall.²²⁰

Porcelain, produced in China and bought by European at various oriental markets. Martin de Baumgarten bought porcelain plates at Damascus in 1508.²²¹ The Cairo bazaars were well-stocked, but prices were very high. Often given as presents from the sultans of Egypt to European monarchs and statesmen, such as the Doge Foscari in 1442. Cabral's fleet carried porcelain, and Góis mentions its presence at Lisbon where it apparently sold at the high prices of 50, 60 and 100 ducats.²²² Heyd is puzzled by the tax regime which measured imports of porcelain in quintals; he thinks it might be concerned with shells of certain sea molluscs (of the *Cipreidi* family) of the same name, which Franco Brunello confirms were used as money in certain parts of the Orient. Brunello postulates a further possibility; that *porcellana* referred to a certain kind of jade or agate from which vases and ornaments were made.²²³

Porcelette, or the herb **purslane** (*Portulaca oleracea*) (*porcellana*, *it.*), a low succulent herb, widely distributed through tropical and warmer temperate regions, used in salads and sometimes as a pot-herb, or for pickling.

Prunes, see **plums**.

Pulses (*Faba vulgaris*), seeds of. Commonly eaten, used to 'binde' the stomach, in plasters and poultices, and various generic properties.

Purslane, see **porcelette**.

Quicksilver (*Argento vivo*), or mercury. Taken from Trento during the Middle Ages, though Hakluyt suggests it was imported from China.²²⁴ Used as 'a vehement scouring medicine', or purgative.²²⁵

Raspe, imported by the Portuguese as *orcil*, 'being an herbe to die with'. Could it be the same as *ruvia* (see entry)?²²⁶

Requitria, from Arabia felix, either a natural or pre-prepared somnifacient, such as the Reques Nicolai, one such concocted by the thirteenth century Byzantine physician of

²²⁰ M. MIECHOWSKI, *Sarmatia asiana atque europea*, in PISTORIUS, *Corpus historiae polonicae*, Basel (1582), I, 141.

²²¹ Martin de BAUMGARTEN, *Peregrinatio* ., 112.

²²² letter of Amerigo Vespucci to Lorenzo de' Medici, Beseguiche, 4 June 1501, pub. in (*The*) *Voyage of Pedro Alvares Cabral to Brazil and India*, Hakluyt ser. II, vol. LXXXI, ed. Greenlee, London (1938) 159-; GÓIS, *Descrição de Espanha* ., 119.

²²³ Franco BRUNELLO, *Marco Polo e le Merci dell'Oriente*, Vicenza (1986).

²²⁴ K.O. MÜLLER, *Welthandelsgebräuche (1480-1540)*, Stuttgart (1934), 26.

²²⁵ T. BRIGHT, *A Treatise, wherein is declared the sufficiency of English medicines* ., 42.

²²⁶ Lodovico GUICCIARDINI, *A Description of the Lowe Countreys* ., 38v.

Nicea.²²⁷

Rhubarb or *Rheum officinale*, Baillon, a perennial, medicinal root plant native to western Asia (Persia) and the mountainous Tibeto-Chinese borderlands more specifically; also *Rheum palmatum* L. Alphita (vide *Dispensatorium des Cordus*); and finally *Rheum rhaponticum* L., which Mabberley considers a parent of the domestic rhubarb whose petioles were stewed as pudding from the eighteenth century. False rhubarb - actually it appears to have been wild mulberry (*Morinda royac*) - was found by Columbus on the island of Amiga, just off Hispaniola.²²⁸ It was widely commented how much better the drug travelled by land than by sea, entering Europe from Constantinople across its eastern perimeter, although the Portuguese persisted in sending rhubarb to Europe via Canton and Malacca.²²⁹ There was a lively public discussion for much of the sixteenth century as to whether rhubarb amounted to the Dioscoridian rhaponticum; some, like Aloysius Mundella (fl. 1538) and Andreas Lacuna (1499-1560), identified the rhubarb that was trafficked into Europe with Dioscorides, while others like Thibault Lespleigney and Valerius Cordus didn't.

The *Livro da montaria* of D. João I advised it to 'correct the liver'; it was also thought that 'þis medicin profitith gretely to purge and remoue flewme from þe mouth of þe stomake. Hit dryith away e<uyl> humours of þe bodt, it expellith and remouith fumo<site>is and wyndis within the body, it makith þi mouth to be well sauorid, amd all þi persone'.²³⁰ In this *Regimen Sanitatis*, rhubarb was the only one of the *simples* to be singled out for description. It retained a widespread application for all digestive ailments. Today rhubarb is still administered for its purgative qualities.

Rice (*Oryza sativa*), thought to be good against a burning stomach and dysentery.²³¹ Famously from Milan and Valencia.²³² A fourteenth century cookery book suggests that rice should be used as a side dish with meat, or in a *blank-manger* with chicken meat, milk of almonds and fried almonds.

Rice-flower, an East Indian plant and sometimes a wider term of reference to the whole *Pimelea* genus. Recorded in the medieval 'London Lickpenny' as a ware tempting poor Kentishmen to spend their last.²³³

²²⁷ HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries of the English nation*, v. III, 341.

²²⁸ *The Journal of Christopher Columbus*, ed. & trans. Cecil Jane, New York (1989), entries for 30 December 1492, 1 January 1493, pp. 130-1.

²²⁹ *Colóquios dos simples, e drogas he cousas mediçinais da India*. ., t. II, 275-6; Duarte BARBOSA, *The Book of Duarte Barbosa*, 385; Tommaso ALBERTI, *Viaggio da Constantinopoli, (1609-1621)*, re-ed. Bologna (1889), 17.

²³⁰ *Livro da Montaria feito por D. João I, Rei de Portugal*, ed. Francisco Maria Esteves Pereira, Coimbra (1918); *The booke, of the nature of certayn herbes and stones, and of Aristotle's secrets*, in *Old English Herbals*, ed. E.S. Rohde for the Early English Text Society, London: Longmans, (1922).

²³¹ *Tacuinum Sanitatis in Medicina Codex Vindobensis Series Nova 2644*.

²³² OLIVEIRA MARQUES, 'Um Preçário de Mercadorias e de Câmbios de Hamburgo, do Século XVI', in *Portugal Quinhentista: Ensaio*, (1987).

²³³ 'London Lickpenny', rhyme formerly attributed John Lydgate, in Eleanor Prescott HAMMOND, *English Verse between Chaucer and Spenser*, New York (1965), 239, 1480-1580
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Rosemary (*Rosmarinus officinalis L.*), widely used as a condiment, a diuretic, to relieve snake bites, to settle the stomach and clear *ictère*, a yellowing of the skin due to surfeit of biliary pigments.²³⁴

Rosewater. Initially little more than rose petals commonly steeped in water, widespread across Europe for use in cookery and at the table, the term might latterly have got confused with 'true rose oil', the attar first described in European sources by Rossi of Ravenna in 1582, an alcoholic solution distilled from the rose essence (Morais Silva) of damask roses, perhaps grown in the Persian Shiraz, and which was imported into India as we learn from Kämpfer, though not, apparently, immediately imported into Europe.²³⁵

Rubies & various precious stones ('cat's-eyes', sapphires etc.), of which the best were to be found in Ceylon; others purchased on the Malabar coast, though Pires reports a mine in the kingdom of Capelāguā, bordering on the kingdom of Arakan and on Pegu. Beyond their value as an ornament, they were commonly ground up to a dust and used against fever but beyond that, they were considered a universal; their medical ascription was derivative from Arab tradition, passed on through such texts as the Antoditarium Nicolai, 'the more or les official pharmacopeia of the School of Salerno'.²³⁶

Ruvia 'to die withall', from Chalangi.²³⁷

Saffron or **Safflower** which was collected principally for its powerful colouring properties from a number of different plants; principally, the orange-red stigmas of two species of crocus (*Crocus sativus*, Linn. and *Crocus clusii*) indigenous to Portugal and the Mediterranean basin generally, but cultivated with most success in Tuscany ('tuschan'), the best accordint to David Abulafia, Abruzzo ('zima'), the Marches ('Safran der Marken') and across Catalonia ('ortsafra') and the north of Spain, from where the South Germans, particularly firms native to Nuremberg, like the Holzschuher, ran a thriving long-distance trade²³⁸; and the largely imported thistle *Carthamus tinctorius L.*, indigenous to a wide area stretching from Asia Minor to India, but also occurring spontaneously in many areas of southern Europe. From its flowers dye is extracted, and from its achenes (referred to in historical texts simply as *seminis*). Saffron was considered an enemy of the sad humours within the early modern pharmacopeia even if modern science has established that 'it is of no value for any medicinal effects'; in the *Tesaurus de' remedi secreti*, Evonorio Filandro advised, for those tormented by black bile, 'wine tinged with saffron, which brings joyfulness and chases away melancholy'.²³⁹ Hieronymus von Braunschweig, resting more firmly in the realm of medical phenomena,

²³⁴ P. MELIUS, *Herbárium*, 267.

²³⁵ KÄMPFER, *Amoenitates* (1712), 373.

²³⁶ KREMER & URDANG, *History of Pharmacy*, Philadelphia, (1946), 27.

²³⁷ Richard HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries of the English nation*, 342.

²³⁸ see L. BARDENHEWER, *Der Safranhandel im Mittelalter*, (1914); also A. PETINO, *Lo zafferano nell'economia del medioevo*, Studi di Economia e Statistica, (Catania, 1951).

²³⁹ check with M. TSCHOLAKOWA, *Studien zur Geschichte der Heilpflanzen*, 3. 'Verwendung des Safran', 179-90. For full ref. see bibliog. of HUNT, *Plant Names of Medieval England*. Halikowski Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580 European University Institute

on the other hand, suggested that saffron 'comforteth the harte/ but it causeth unluste in the stomacke & therefore oughte but a little be put therein/ yet causeth it good blood'.²⁴⁰ It is suggested elsewhere that the oil was used as a preventative for sclerosis of the arteries.²⁴¹ Saffron was also used widely in perfumery, and even as a relish.

Although medieval texts consider saffron an oriental product, I am not sure whether this was genuinely exported from Malabar - it was traditionally exported from Basra and Persia - and whether we are not perhaps confusing things somewhat with turmeric, known as *açafrão da terra* and, most tellingly, *safran des Indes* and which was also used to produce a reddish-brown dye. K.S. Matthew suggests that saffron was imported into India, and Heyd confirms that saffron was commonly imported by Cyprus and Egypt from the West, though medieval writers such as Pierre de St. Omer praise highly the saffron of Cilicia and Felix Fabri that of Korykos.²⁴² The Hamburg price list of 1592 mentions only saffron from England (*Saffraen Engels*), though Boissonade suggests that the English themselves preferred to import French varieties, commonly from Anjou, Albi and the Gâtinais, via Bordeaux.²⁴³

Sagapene, a gum extracted from the root juice of *Ferula*, or Fennell Giant. Gerard considered that while sagapene was the gum of *Ferula* growing in Media, ammoniacum was that from the same plant growing in Cyrene, and galbanum, that growing in Syria. Sagapene was used as a purgative, against all disease of the head (apoplexy, epilepsy), cramps and aching limbs.²⁴⁴

Sal Ammoniac, from Sindh and Cambay, an important ingredient in Paracelsian chemistry.²⁴⁵ An aperient (i.e. a purgative, or laxative).

Salt. Considered by Jean Bodin one of the great resources of France, 'a manna, God-given with little labour'.²⁴⁶ But 'bay salt' only reached its commanding position on the European market in the fifteenth century (salt from Cyprus and Ibiza, too, travelled internationally in Venetian hands); before then salt was obtained more regionally, in

²⁴⁰ VON BRAUNSCHWEIG, *A Most Excellent Homish Apothecarye*, (1561), 22.

²⁴¹ Attila SZABÓ, 'Étude et note à l'herbarium de Melius', in Péter MELIUS, *Herbárium*, București (1978), 385.

²⁴² K.S. MATHEW, *Portuguese Trade with India in the Sixteenth Century*, 137; W. HEYD, *Histoire du commerce du Levant au Moyen Âge*, 668 using Bartholomeo di PA(S)XI, *Tariffa de pexi e mesure correspondenti al Levante dal Ponente*, Venice (1503) and the *Traité d'Emmanuel Piloti sur le passage en Terre Sainte*; Pierre de ST. OMER, in M.P. MERRIFIELD, *Original Treatises dating from the XIIth to XVIIIth centuries, on the arts of painting in oil, miniature, mosaic and on glass; of gliding, dyeing and the preparation of colours and artificial gems*, London, (1849), 131-33 and Felix FABRI, *Evagatorium*, ed. K. D. Haßler, Ulm, (1909), 111, 215.

²⁴³ OLIVEIRA MARQUES, 'Um Preçário de Mercadorias e de Câmbios de Hamburgo, do Século XVI', in *Portugal Quinhentista: Ensaios*, 217; BOISSONADE, *Le mouvement commercial entre la France et les îles britanniques* .., 220.

²⁴⁴ GERARD, *The Second Booke* .., (1597), chap. 411, 898-9.

²⁴⁵ HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries* .., 341.

²⁴⁶ Jean BODIN, *Réponse de Jean Bodin à Monsieur de Malestroict*, ed. Henri Hauser (Paris, 1932; reprint of 1568 ed.), 13.
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England from the salt mines of Worcestershire, or the simple saltworks along the coast (which relied on the principle of evaporation) such as at Lymington.²⁴⁷

Saltpeter (*Sal nitrio*), nitrate, particularly nitrate of potassium.

Sandalwood. Sixteenth century commentators distinguished three qualities: yellow (*citrino*), red (*rosi*) and white (*bianchi*).²⁴⁸ Red sandalwood seems to have been stripped from two different trees, *Adenanthera pavonina* L. and *Pterocarpus santalinus* Linn., and from factory inventories and returning Portuguese cargoes appears to have been the variety most in demand.²⁴⁹ The *Adenanthera*, on the other hand, was something of an impostor, and if a handsome, strikingly physically similar wood and accredited the same medicinal values as the 'real' sandal above, was otherwise devoid of the other sandal's colorant or aromatic qualities. The ambiguities seem nonetheless to have been exposed at Calicut, on whose market *Adenanthera* was worth at the most $\frac{1}{8}$ of *Pterocarpus*' price.²⁵⁰ Conti and Girolamo di S. Stefano both saw red sandalwood on the Coromandel coast heading for the Dekkan, but the wood would appear to grow in other parts of Ceylon and India.²⁵¹

The white or Indian sandalwood (*Santalum album*, Linn) is probably the same *Aguila Brava* that grew between Melinde and Cape Comorin and in Ceylon. Arends-Hickel believes that protracted storage turned white sandalwood yellowish, though this would be hard to square with other reports that the white offered a fainter smell than the yellow.²⁵² Sandalwood was produced mostly in Coromandel, on Timor and around Tennasserim, which served as its principal port of export. Lesser prized sandal wood was to be found in Java and at Macassar in the Celebes. Ritter suggests that sandalwood of an excellent quality grew in the Ghats.²⁵³ Hakluyt distinguished between wild sandalwood, found at Cochin, and domestic sandalwood from Malacca (341). Otherwise, Columbus shipped what he called 'white sandalwood' back to Spain from the West Indies, but it was probably torchwood (*Amyrid elemifera*).²⁵⁴

Much drawn on medically, sandal was used as an astringent and tonic, externally as a 'refrigerant' so as to lessen fever, internally to purify the blood and to allay sickness. Used to anoint the body and to refresh it, and featuring comestibly in the betel compound

²⁴⁷ Margaret Wade LABARGE, 'The Spice Account', 36.

²⁴⁸ see, for example, 'Avviso da Lisbona de dii 15 lu.io 1514 dil carico delle barze venute de India adirita in Venesia in forticho', Archiv. Generali Toscani and repr. in GUBERNATIS, *Storia dei viaggiatori italiani nelle Indie Orientali*, Livorno (1975), 380.

²⁴⁹ PEGALOTTI, *La Pratica della Mercatura*, 377 and FLÜCKIGER & HANBURY, 2 ed., 199f., 599f.

²⁵⁰ BARBOSA, *The Book of Duarte Barbosa*, 384-85.

²⁵¹ AINSLIE, *Materia indica*, I, 385 f.

²⁵² D. ARENDS, E. HICKEL & E. SCHNEIDER, *Das Warenlager einer mittelalterlichen Apotheke, Ratapotheke Lüneburg 1475*, Braunschweig (1960), 77. CRIŞAN cites the Linnean classification *Diadelphia Decandria* L. for sandalwood. What has happened to this ascription?

²⁵³ Carl RITTER, *Die Erdkunde im Verhältnis zur Natur und zur Geschichte des Menschen*, Berlin: Reimer (1832), vol. V, 'Die Indische Welt', 815.

²⁵⁴ G: GRIFFENHAGEN, 'The Materia Medica of Christopher Columbus', *Pharmacy in History*, (1992), 34, no. 3, 139.

of the rich.²⁵⁵

Scammony or scamonia (*Convulvulus scammonia*, L.), a powerful and one of the most commonly used purgatives. If the Levant scammony was fetched from the Middle East, northern Syria and Persia in particular (Scammonea di Soria, S. d'Antiochia), but also Turkey (Scammonea turchesca), there also existed an indigenous variant, *gallice et anglie scamoyne*.²⁵⁶ Imported scammony was often referred to as 'refined scammony' to distinguish it from domestic variants.

Senna, the dried leaves or pods (or more specifically *siliqua*) of *Cassia senna*, but also of many other genera such as *Colutea arborescens*, a plant (*herba*) indigenous to tropical Africa, trafficked through Egypt, with a species growing in Italy (*Cassia italica*). Gerard indicates that the best was brought out of Alexandria; Hakluyt suggests Mecca; Michiel, Crete.²⁵⁷ A purgative, chiefly as laxative, the boiled leaves, or more specifically the *siliqua*, were thought to cure melancholy and cleanse the blood.²⁵⁸ Seems to have been confused with canafistula.²⁵⁹

Seragni, from Persia as Hakluyt observes.

Sebestena (Sebestens), the mucilaginous sweet plum-like fruits of *Cordia myxa*; Hakluyt ascribes them to Cyprus. Used in the eighteenth century for hoarseness and cough.²⁶⁰

Sesame seeds, from *Sesamum orientale* L. and growing across the Old World tropical and Mediterranean belt. Used for oil and to make the sweet known as *halvá*.

Silks. Silks from China were increasingly re-exported through Portuguese Malabar. Of a cargo exported in 1518, 45 quintals of Chinese silk was included.²⁶¹ Also traded were the silks of Aden (*Atdassetta*), from Ardasse in Persia, that of Cannar, a city on the plain to the west of the Caspian, *seta cavallina* from Kabala, but also *seta di Romania* and *seta turci*. After the Turkish seizure of the Black Sea routes, silk came down through Aleppo and Damascus. Matteo da Bergamo speaks of *tela tocca*, which seems to have been decorated with gold and silver stitching (*lames*).²⁶² Dante speaks of *drappi tartareschi*, and Leonardo Olschki goes some way to an investigation of this fashionable phenomenon

²⁵⁵ ORTA, *Colóquios dos simples, e drogas he cousas mediçinais da India*. ., II, 50, 281 ff. and 181-182.

²⁵⁶ G. da UZZANO, *Pratica delle mercatura*, 192.

²⁵⁷ Pietro Antonio MICHIEL, Biblioteca Marciana, Venezia.

²⁵⁸ GERARD, *The Historie of Plants*, 1114; MELIUS, *Herbárium*, 152.

²⁵⁹ see, for example, the botanical denomination ascribed the illustration of the canafistula in the *Secreta Salernitana* of Spanish or Provençal provenance, in W. BLUNT, *The illustrated herbal*, London: F. Lincoln (1979), 59.

²⁶⁰ *Edinburgh New Dispensatory*, 4 ed., (1794).

²⁶¹ A.N.T.T., Núcleo Antigo, no. 705.

²⁶² letter (the short version) of 30 March, 1503, published in *Voyages de Vasco da Gama. Relations des expéditions de 1497-99, & 1502-03*, ed. Paul Teyssier & Paul Valentin, Paris: Chandeigne (1995), 319-340.

which smote the patrician classes of Italian cities of the fourteenth and fifteenth centuries.²⁶³

Organsine was some kind of finished product of Vincenza, akin to that of Orso, equally in northern Italy; silk production had spread rapidly from Lucca to other Tuscan cities and to Genoa, which worked fibres imported from Granada and Valencia as *seda en madejo*, but also from Calabria, and even locally.²⁶⁴

Silver Leaf (of Cologne), or *Argento filado di Colonia*. As the moon was identified with the brain in Paracelsian medicine, silver was used against epilepsy and melancholia.

Smalt, a ground potassium glass of blue colour owing to an input of cobalt oxide from the mineral smaltite ($[\text{Co,Ni}]\text{As}_3_2$) during manufacture. Considered of Near Eastern origin, in common with the development of other vitreous enamel techniques. Possibly from known sources of cobalt ores near Kashan in Iran. Smalt was known to Venetian glassmakers as early as the fifteenth century and produced in the Netherlands in the sixteenth.²⁶⁵

Soap. Venice was considered a reliable provenance, though they may have merely been re-exporting the famed soap of Aleppo.²⁶⁶ The Frankfurter Messekatalog lists *Sapo gallicus* (which may be reference to the soap of Marseille which came to replace that of Aleppo), *venetus*, *belgicus seu niger* (perhaps 'nieder' i.e. from the Netherlands).²⁶⁷

Soldanella, or Mountain Bindweed (*Soldanella alpina* L.), a purgative and wound healer growing in the Alps and other mountainous areas, used against 'hydroptike' stomachs.²⁶⁸

Spicae Celtici, or *Valeriana celtica* L. Valerian was advised by Fabio Colonna as a remedy for epilepsy.

Spikenard, the prized rhizomes of *Nardostachys grandiflora* de Candolle (1778-1841), also known as *N. jatamansi*, a dwarf herbaceous plant of northern Himalayan India, produces an aromatic oil employed in the preparation of a costly ointment known as spikenard, lavender spike, and *espigua da India* to the Portuguese, and presumably, *spica indici* in Latin. Prized in salves in Roman society, with further applications as an antidote to poison and to cure stones, as well as use in scent-making. Orta tells us that it grew

²⁶³ DANTE, *Inferno*, Canto XVII, 17; for more on Tartar cloths, see Pageot TOYNBEE, 'Tartar cloths', *Romania*, XXIX, 1900, 558 ff.; otherwise, OLSCHKI, Leonardo. 'Asiatic Exoticism in Italian Art of the Early Renaissance', *Art Bulletin*, New York, June 1944, 103. Olschki refuses to go as far as Gustave SOULIER, who has suggested that Quattrocento Tuscany was ablaze with *fureur asiatique*, *Les influences orientales dans la peinture toscane*, Paris (1924), 321.

²⁶⁴ OLIVEIRA MARQUES, 'Um Preçário de Mercadorias e de Câmbios de Hamburgo, do Século XVI', in *Portugal Quinhentista: Ensaios*, 218; David ABULAFIA, *L'Economia italiana e le economie mediterranee ed atlantiche*., 20.

²⁶⁵ RIEDERER, J., 'Die Smalte', *Deutsche Farben Zeitschrift*, 22, (1968), 387-89; LAURIE, P., *The Pigments and Mediums of the Old Masters*, London (1914), 12-16.

²⁶⁶ see Eliyahu ASHTOR, *Levant Trade in the later Middle Ages*, Princeton University Press, (1983).

²⁶⁷ D. ARENDS, *Pharmazeutischer Großhandel*, 7.

²⁶⁸ GERARD, *The Historie of Plants*, London (1597), ch. 293.

extensively in Chitor, Cambay, Bengal, Mandou and in the vicinity of Mt. Eli; Hakluyt mentions Lahore and Sindh.²⁶⁹ Traded in small measure by the Portuguese (50–400 kg).

Spodio di Elefante (*eber ustum*), the incinerated ashes of elephant bones.

Spodium(-o) di can(n)a, or **tabasheer**, also called bamboo salt, a siliceous (silicon impregnated) concretion, white or translucent, occasionally formed in the joints of the bamboo, *Bambusa arundinacea* and other Asian bamboos, but commonly imported from Cochin.²⁷⁰ Might this be what Pliny describes as saccharon, ‘a kind of honey that collects in reeds, white like gum, and brittle to the teeth; the largest pieces are the size of a filbert’ and used exclusively for medicinal purposes? Maberley confirms that tabasheer held an alleged medicinal value; more specifically ‘odoratam, facultatis refrigeratoriae, et cor maxime roborantis itidem intelligunt’.²⁷¹ Not to be confused with generic spodium, or the carbon ash of incinerated animals.²⁷²

Sponge (lapis) or *Spongea usta*, an ancient medicine against gout, a diuretic and absorbant (used against spots and pustules). Sponge carbon, rich in iodine salts, was commonly used as a throat treatment.²⁷³

Staphisagrae, or ‘Staues aker’ (*Delphinium staphysagris* L.). Provokes vomiting; mixed with oil or grease good against lice, scabies and manginess, dulls toothache.²⁷⁴

Stincus Marinus, the dried powder of the *Lacerta scincus* L. or Cyrenaic (monitor?) lizard found in Egypt and Arabia. Dioscoridian tradition prescribed it as an antidote against poison and as an aphrodisiac. Much used in compositae.²⁷⁵

Storax, resin of the styrax plant and which produces a balm. The Nuremberg Obstmarkt-Apotheke and the Frankfurter Liste register only *Storax calamitus (calaminthae)*, that Hakluyt ascribes to Rhodes and ‘Canemarie, within Cara?ania’, the stick-shaped resin of the tree *Liquidambar orientalis* Miller, found across the Levant (note the presence of *Storax arabica* in other sources). Others cite *Storax liquidus(-a)*, the balm of *Liquidambar orientalis* also from Rhodes and *Storax ruber*, a cheaper, reddish type. Sernigi reported storax in Calicut.²⁷⁶

It is not clear whether storax might have equally referred to certain compounds: of *almea* (a type of balsam), yeast, honey and oil which was produced in Aden and

²⁶⁹ Garcia de ORTA, *Colóquios dos simples, e drogas he cousas mediçinais da India.* .. ed. Ficalho, Lisbon (1895), vol. II, 291 ff.

²⁷⁰ HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries.* .. v. III, 342.

²⁷¹ Prospero ALPINI, *Rerum Aegyptiarum.* lib. III, vii (1755).

²⁷² Eva CRIŞAN, *Materia Medica de Transylvanie*, 121.

²⁷³ W.I. SCHNEIDER, *Lexicon zur Arzneimittelgeschichte*, 63.

²⁷⁴ GERARD, *The Second Booke.* .. (1597), ch. 130.

²⁷⁵ W.I. SCHNEIDER, *Lexicon zur Arzneimittelgeschichte*, 61.

²⁷⁶ letter of 10 July, 1499, from Lisbon, published by Carmen RADULET, *La prima circumnavigazione dell’Africa*, Reggio Emilia: Diabasis, (1994).

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shipped into Europe exclusively via Venice; or a compound of black benzoin, powder of sandal and a wood known as agallochum (*aguilla*, see sandalwood) in Cochin.²⁷⁷

Mabberley suggests that not only is storax an aromatic balsam used medically and in scent, but it has ascribed medical properties as an antiseptic and is used in skin disease. The Venetian list of spices published by Rawdon-Brown considered storax a tonic and emollient.²⁷⁸

Strammony (see *datura*).

Sublimat, a corrosive, probably mercury chloride (HgCl₂).²⁷⁹

Sugar, from the sugar cane. Gastronomic sweetener and delicacy, but also the principal ingredient of medicinal electuaries, typically restorative. Existed as *chucré blanc* and *chucré brun*; another source sub-divides this into red sugar, used for cooking, and black sugar for the pharmacy.²⁸⁰ The Nördlinger Register lists *zuccarum Tabarset, penidiarum* (quills), *farina zuckari* (granules), and *zuccarum candie*.²⁸¹ The Große Ravensburgische Gesellschaft imported sugar from Valencia across Genoa and from Sicily across Naples. The Hirschvogel bought sugar loaves (apart from molasses the cheapest form of sugar traded) in Venice and *polvere de zucchero* (the most expensive form of sugar traded) from Cyprus. With the Portuguese, sugar plantations spread across the Atlantic archipelagoes and thence to Brasil. According to the mid-sixteenth century Spanish *Memoria de las Mercaderías quen entran en el Reyno*, the sugar of Madeira was the best in the world (*es la mejor del mundo*), whilst that of São Tomé, the Cape Verdes and Brasil was poor quality (*bajo*), to be refined in Lisbon.

Sulphur, or **brimstone**. Usually means sublimated sulphur, or 'flowers of sulphur'. Used in the eighteenth century as a cooling cathartic, diaphoretic and resolvent; it antagonizes the side effects of mercury and antimony; also applied to skin diseases, such as eczema ('sawcefleem').²⁸²

Sumac(-h/k) leaves, *Rhois coriariae* known as Sicilian sumac or *Rhois cotini*, colloquially Triest sumac, if it was (also) sought in Cyprus.²⁸³ The ground dried leaves formed a very important tanning material for sheepskin etc. in southern Italy (tanning content c.

²⁷⁷ Tomé PIRES, *The Suma Oriental*, App. I, 517; J. RIDDLE, 'The Introduction and Use of Eastern Drugs in the Early Middle Ages', *Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften*, 49, (1965).

²⁷⁸ MABBERLEY, *The Plant-Book. A portable dictionary of the higher plants*, C.U.P. (1986 edition), 336.

²⁷⁹ MEYER-ORLANDO, *Technisches Wörterbuch*, 6th edition.

²⁸⁰ Reinhold RÖHRICHT & Heinrich MEISNER, 'Ein niederrheinischer Bericht über den Orient', *Zeitschrift für deutsche Philologie*, (1886), 19, 84.

²⁸¹ FLÜCKIGER, Fr. A. 'Das Nördlinger Register', *Archiv der Pharmazie*, 211 (1877), 111.

²⁸² 'There was no mercury, sulphur or litharge./ No borax, ceruse, tartar could discharge./ Nor ointment that could cleane enough, or bite, to free him of his boils and pimples white', Geoffrey CHAUCER, *The Prologue to the Summoner's Tale, The Canterbury Tales*.

²⁸³ HAKLUYT, *The Principal Navigations, voyages, traffiques and discoveries.*, v. III. 343. Halikowski Smith, Stefan (2001), Portugal and the European Spice trade, 1480-1580
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26%), the dye for Cordoba and Morocco leather. The seeds, 'eaten in sauces with meate, stoppeth all manners of fluxes of the belly'; in composition, went towards healing haemorrhoids.²⁸⁴ See also **gallnuts**.

Sweet bay, from the bay laurel (*Laurus nobilis*).

Sweet rush, a rattan (*joncus*), in Latin *juncus odoratus*, perhaps indigenous to Europe, that was often confused with the lemon or ginger-grasses of Malabar, such as *Andropogon Schoenanthus*. John Chadwick suggests that the confusion goes back to Mycenaean times; the Linear-B stone tablets speak of 'both rushes' (MY Ge 602.5).²⁸⁵ Other names include *esquinanthus* or Mecca-grass (*esquinamte*, *palha de Mecca* or *erva de Mascate*), and in Asia, *cachabar*, *haxiacacule* and *alaf*.²⁸⁶ One source thinks that botanically this is *Andropogon laniger*, another *Cymbopogon Schoenanthus*, *Spreng*. According to Pires, the latter grew in Socotra and the three Arabias (Petrea, Felix and Arabia sub Egypt).²⁸⁷ Hippocrates claims was used for toothache, tonic and in dysentery, also the rush-like leaves were spread on hall and church floors and it was used in the 'oil of holy ointment' for anointing altars and sacred vessels. It is an effective insecticide and is still important in flavouring Continental *eaux-de-vie*.

Tamarind, appreciated for the pulp formed inside the pod of *Tamarindus indica*, collected across Malabar and Gujurat, but also growing in Tamor Coromandel, and Sunda and which, when ripe, resembles a date. Previously distributed by the Venetians, from a possible source at Basra, it had medicinal value.²⁸⁸

Tartar (white), or dihydroxybutanedioic acid, a dicarboxylic acid in partially purified form obtained from the by-products of wine fermentation (hence the German name, *Weinstein*); also known as wine lees, or alum of lees. Used as a mordant in the dyeing industry, but also as a skin-cleanser (see under sulphur).²⁸⁹

Terebinth, or **turpentine**, a gum (resin) extracted from the Turpentine tree (*Pistacia terebinthus*) growing in the Levant, Cyprus and northern Africa and considered by Dioscorides the finest of its kind (turpentine as a generic was taken from a wide number of sources including torchwood, *Amyrid elemifera*). Typically appears as Venice turpentine.²⁹⁰ Used to 'looseth the belly, openeth the stoppings of the liuer and spleene,

²⁸⁴ GERARD, *The Third Booke* ., (1597), ch. 105.

²⁸⁵ J. CHADWICK, *The Mycenaean World*, Cambridge University Press (1976), 119-.

²⁸⁶ ORTA, *Colóquios dos simples, e drogas he cousas mediçinais da India* ., II, 311

²⁸⁷ PIRES, *The Suma Oriental*, vol. 2, 514 (1944).

²⁸⁸ ORTA, *Colóquios dos simples, e drogas he cousas mediçinais da India* ., ed. Ficalho, Lisbon (1895), II, 319 ff.; T. PIRES, *The Suma Oriental*, 513; there is an image of the tamarind in (*The Essential Guide to Spices*, BBC Magazines (1996), 54.

²⁸⁹ see Girolamo GARGIOLLI, *L'arte della seta in Firenze: trattato del secolo XV*, Firenze: G. Barbera, (1868).

²⁹⁰ see, for example, Theodore Turquet de MAYERNE, *Pictoria Sculptoria & quae subalternarum Artium* (1620); MONTAIGNE also refers to such when he falls ill in Rome, in LINKS, *Travellers in Europe* ., (1980), 140.

prouoketh vrine, and driueth fourth grauell'.²⁹¹

Terra Lemnia(e), associated with Lemnos. A pale, red bolus ('very viscid, clayey earth') that effervesces slightly with acids.²⁹²

Terra Sigillata. A generic term for a variety of earth tablets, each bearing a distinctive seal attesting to its place of origin (e.g. 'Silesian earth'). Thomas Hariot reports on an equivalent of *terra sigillata* from the New World, used by the locals 'very much for the cure of sores and woundes'.²⁹³

Tignames, or **elichrysum**. A plant the flowers of which used as per wormwood.²⁹⁴

Tincal, almost certainly a resinous gum akin to Tragacantha and Sarcocol. Pires suggests it was found widely in Cambay and Chaul.

Tragacantha or **Draganti**, or **Diadragagantum**, from *Astragalus gummifer*. A gum used since Ancient Greece, of which both edible, but chiefly exploited for medicinal application. A gypsum, or sulphate of calcium, was prepared - a kind of plaster of Paris capitalising on the plant's 'emplasticke or dawbing qualitie'. Tragacanth was used culinarily to fashion 'pretie sweete things of pleasure'. Also used as an energising refreshment, and in the preparation of azure blue and gold.²⁹⁵ Grew across Greece, particularly the Morea, and into Turkish Asia; Pires suggests 'from the kingdom of Mandu and from Delhi'.²⁹⁶

Turmeric, the rhizome of two species of *Curcuma*, *C. domestica* and *C. longa*. Also known as *açafrão da terra* for yielding a yellow or orange dye formerly used principally as a food colouring, it grew aplenty in Malabar.

Turpeth, or **turbith**, a drug prepared from the (bark of the) root of the East Indian jalap (*Ipomoea turpethum*). It grew in Cambay, Surat, Diu, Baçaim and Mangalore as well as in Egypt; Ruddock suggests the East Indies and Formosa.²⁹⁷ The Grete Herball suggests 'it purgeth flewme and the mouth of the stomake.. It is also good agaynst y(s)lyake passyon and agaynst podagre gowt'. Otherwise used against worms.

Tutty, also known as tutenag and pampholix, a crude oxide of zinc adhering in grey or

²⁹¹ GERARD, *The Third Booke*. ., (1597), ch. 79.

²⁹² *Edinburgh New Dispensatory*, 4 ed. (1794).

²⁹³ Thomas HARIOT, *A Briefe and True Report of the New Found Land of Virginia*. ., 'Wapeih', www. /1588-1.html.

²⁹⁴ RAWDON-BROWN, (*The*) *Calendar of State Papers and Manuscripts relating to English affairs existing in the Archives and Collections of Venice etc.*, I, 67.

²⁹⁵ W. HEYD, *Histoire du commerce du Levant au Moyen Âge*, by F. Reynaud and repr. Amsterdam (1967).

²⁹⁶ GERARD, *The Historie of Plants*, London (1597), 1148; PEGALOTTI wrote of a 'Draganti di Turchia', *La Pratica della Mercatura*.

²⁹⁷ GOMÇALLVEZ, *Livro que trata das cousas da India e do Japão*, 56-57; RUDDOCK, *Italian Merchants and Shipping in Southampton, 1270-1600*, Southampton (1951).
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 European University Institute DOI: 10.2870/92585

brownish flakes to the flues of furnaces in which brass is smelted, but also occurring in some countries such as Persia, especially the province of Kerman, and India as a natural mineral of zinc, and mined. Orta distinguished three separate types on the Indian market; traditionally, the raw zinc salts were converted into zinc oxide in furnaces in Alexandria.²⁹⁸ Used in salves, pastes and powders for skin problems and to clean and heal flesh wounds and 'bruses'.²⁹⁹

Unicorum Marinum, from *Monocerus verum*, the tusk of the narwhal, taken to be that of the mythical unicorn. Ground up or, as we see from the Habsburg treasury, carved into a drinking receptacle, the horn of the 'unicorn' was accredited extraordinary properties as a poison antidote.³⁰⁰ The pharmacopeias of the seventeenth century enthusiastically extended the therapeutic applications of 'unicorn' and rhinoceros horns.³⁰¹ But also incorporated into emblems of sovereignty or pastoral office, such as we find in the sceptre of Emperor Matthias, and frequently in bishops' staffs.

Venus Haire, or Maiden haire (*Adiantum Capillus Veneris L.*). Gerard records that as well as the domestic species (*verus*), there was an analogue imported herb species from Syria (*Syriaca*). Used to loosen the belly, to flush away obstructions such as kidney stones and 'the Kings euill, and other hard swellings'. Subject to a wave of enthusiasm in seventeenth century France following a treatise by Pierre Formi hailing it as a 'second panacea'. 'There is no part of our bodies over which it does not have influence, nor illness against which it cannot bring the benefit of its healing powers'.³⁰²

Verdigris. The *aerugo* of Pliny, and *verderame* or *verde eterno* of Italian treatises on painting, denoting various blue-green and green corrosion products formed at the surface of copper, copper alloys and copper ores. Used as the principal green pigment in European easel painting from the fifteenth to the seventeenth centuries; copper resinate, a variant coloured by the copper salts of resin acids, was used as a transparent green glaze. Prepared in wine-growing areas such as Montpellier by burying copper plates together with winemarc in dung so as to cause it to ferment. Marketed as 'crystallised', 'crude', French etc.

Vermilion, a shorthand for *vermiculus cinnabaris*, an artists' pigment extracted from the mineral cinnabar (q.v.), whose names are in fact fully interchangeable and can refer to both the natural and the manufactured product. From the seventeenth century, however, vermilion is more frequently referred to than cinnabar.³⁰³

²⁹⁸ ORTA, *Colloquies on the Simples..*, (1913 ed.), 451-2; BARTELS, *Drogenhandel und apothekenrechtliche Beziehungen zwischen Venedig und Nürnberg*, §57, 71.

²⁹⁹ LONICERUS (Adam Lönitzer), *Kräuterbuch* (Frankfurt, 1598), 709; John MINSHEU, *Spanish-English Dictionary* (1599).

³⁰⁰ HEIN, *Apotheker Kalendar* (1958, Januar) and, more specifically, A. WEIXLGÄRTNER, 'Die weltliche Schatzkammer in Wien', in *Jahrbuch der kunsthistorischen Sammlungen in Wien*. N.F. Bd. 2, Wien (1928), 297 ff.

³⁰¹ see, for example, the *Pharmacopoeia Londinensis or the New London Dispensatory*, London (1682).

³⁰² FORMI, *Traité de l'Adianton ou cheveux de Venus*, Montpellier (1644), 1.

³⁰³ R.D. HARLEY, *Artists' Pigments c. 1600-1835*, London (1982).
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Vitriol, any of certain hydrated sulfates or sulfuric acid. Used both as a dyestuff and mordant. **Vitriolum album**, *Galitzenstein* or white vitriol is zinc sulfate; **Vitriolum Romanum** was either a vitriol of iron (*Eisenfarbe*) or else copper (II) sulfate antahydrate, known as *Kupferwasser* - there might have been some overlap with green vitriol (ferrous sulphate heptahydrate), with which nuances in the grey-blue range could be achieved. **Atramentum nigrum et rubrum** was a greyish-black or else brownish-red mineral mixture of vitriol.

Vomiting nuts, *Strychnos nux vomica* L. whose origins were for long unclear. Gerard suggests they were to be found 'in the deserts of Arabia, and in some places of the East Indies', while Hakluyt suggests Malabar. We owe the first accurate description to Valerius Cordus (1515-44). Considered too potent to be administered alone; commonly grated. In small doses, said to be a tonic, diuretic and sometimes diaphoretic and cathartic, and therefore appropriate for treating some fevers, including dysentery. In larger doses, could cause death from respiratory failure.

Wax, see **Lacre**.

'White Copper' of China. This cupro-nickel alloy was often confused with tutty (*vide*) and is thus most likely to have been the zinc oxide *Nihil album* mentioned in the Sibiu inventory of 1580 and that of Brasov from 1576. Libavius, instead, described the 'white copper' as 'a special kind of sonorous tin'.³⁰⁴ Objects and ingots were imported from China, but the substance's true nature failed to be discerned by European chemists over the sixteenth century.

White Lead (Lithargyrum, or plumbum album). Experts argue as to whether white lead was simply the basic lead carbonate $2\text{PbCO}_3(\text{OH})_2$ or compounded with hydrated oxide of lead, though for our purposes it might be more convenient to see it as a generic beneath which there were variations - Chaucer mentions ceruse and litharge.³⁰⁵ In any case, white lead was the only white pigment used in European easel painting until the nineteenth century. Most of the white lead (lead white) of European paintings was ground in vegetable drying oil, but there are numerous examples of early Italian panel painting in which pigment was conserved in egg tempera.³⁰⁶

White Pepper, the ripe fruits of *Piper nigrum* with their pericarp removed.

White Sucket, from Sindh, Cambay (Gujurat) and China.³⁰⁷

Woad, or *vitrum* in Latin, a European herb of the mustard family (*Isatis tinctoris*), the principal blue colourant in dyeing prior to indigo, yielded from the plant's leaves, known in the Middle East and common in Europe. Produced in Germany and Poland, but also

³⁰⁴ Andreas LIBAVIUS, *De natura metallorum* (1599), as cited by Joseph NEEDHAM, , V, pt. 2, 227.

³⁰⁵ Geoffrey CHAUCER, The Prologue to the Summoner's Tale, *The Canterbury Tales*.

³⁰⁶ Roy ASKOK, *Artists' Pigments. A Handbook of Their History and Characteristics*, 2 vol., Oxford University Press, (1993).

³⁰⁷ HAKLUYT, 'A declaration of the places from whence the goods subscribed doe come', *The Principal Navigations, voyages, traffiques and discoveries of the English nation*, vol. III, 341. White sucket is not indexed in GERARD.

the famous *pastel de Toulouse*, whose production Guicciardini estimated at 200,000 bales, also known as *guesde* or *vouede*, of which others were produced in Normandy, though that of Terceira in the Azores also circulated widely, such that the Affaitati could sell 16.000 bales in 1543.³⁰⁸

Wormseed, or *Chenopodium ambrosioides*. There seems to have been another classification for this plant as *Artemisia santonicum* and other related species, such as the Levant wormseed (*Artemisia cina*), which grew as far as Persia. Anthelminthic.

Wormwood (of the *Artemisia* genera), grew in Cambay and around Chaul, but a European variant existed equally. Good against indigestion, also a vermifuge and a stimulant used by women; yields a bitter dark green oil used in absinthe.³⁰⁹

Zedoary, the aromatic tuberous root of *Curcuma zeduarua* (*zedoara*) Roscoe, which was also known as wild ginger, of an ash colour and sold as long zedoary and round zedoary. These two grew in Malabar, Cananore, Mangalore, Ceylon, Cochin and China, but also Java and Madagascar.³¹⁰ Was widely incorporated into antispasmodic, aphrodisiac and stimulant compounds (for its heating effects), and for hepatic disturbances.³¹¹ Used to relieve the mercury inhalations of gold-workers, and a common ingredient in food and drinks.

Zerumbete. Another species of the *Curcuma* genus zerumbet (*zerumbete*, Pg.), which grew in the region of Calicut and Cananore, was exploited for its aromatic tuberous root, which was also known as wild ginger (see also cassumunar, and zedoary). The plant itself was used on occasion, giving rise to taxonomic confusion; distinctions between the species were slim anyway and in English turmeric, zedoary and zerumbete were known as *Corcunia* (from *Curcuma*).³¹²

³⁰⁸ GUICCIARDINI, *Belgium Universum*, 101, col. 1 & 2; cited in W. BRULEZ, 'The Balance of Trade of the Netherlands. .', 26.

³⁰⁹ T. PIRES, *The Suma Oriental*, 512; also Abraham COWLEY, *Plantarum, the third and last volume of the works of Mr. Abraham Cowley, including his six books of plants*, (1721).

³¹⁰ DALGADO, *Glossário Luso-Asiático*, Coimbra (1919-21), v. II, 442.

³¹¹ W.I. SCHNEIDER, *Lexicon zur Arzneimittelgeschichte*, 69; Jacques BROSSE ed., *A rota das especiarias*, I.N.A.P.A., Lisbon (1989), 236-.

³¹² ORTA, *Colóquios dos simples, e drogas he cousas medicinais da India*. ., (1895), II, 367; HAKLUYT, 'A declaration of the places from whence the goods subscribed doe come', *The Principal Navigations, voyages, traffiques and discoveries of the English nation*, vol. III, 341.

Appendix 9. An inventory of spices of today.

Source: *The Essential Guide to Spices*, BBC, (1996).

Ajowan Seeds	(<i>Carum ajowan</i>)	Vanilla	(<i>Vanilla planifolia, fragras</i>)
Allspice	(<i>Pimenta dioica</i>)	Wasabi	(<i>Wasabia japonica</i>)
Amchoor Powder	(<i>Mangifera indica</i>)		
Anardana	(<i>Punica granatum</i>)		
#Aniseed	(<i>Pimpinella anisum</i>)		
Annatto	(<i>Bixa orellana</i>)		
Asafoetida	(<i>Ferula asafoetida</i>)		
#Caraway	(<i>Carum carvi</i>)		
Cardamom	(<i>Elettaria cardamomum</i>)		
Cassia	(<i>Cinnamomum cassia</i>)		
Cayenne	(<i>Capsicum frutescens</i>)		
#Celery Seed	(<i>Apium graveolens</i>)		
Chilli Peppers	(<i>Capsicum frutescens</i>)		
Cinnamon	(<i>Cinnamomum verum</i>)		
Clove	(<i>Eugenia aromaticum</i>)		
#Coriander	(<i>Coriandrum sativum</i>)		
#Cumin Seeds	(<i>Cuminum cyminum</i>)		
Curry Powder.			
#Dill Seed	(<i>Anethum graveolens</i>)		
#Fennel Seed	(<i>Foeniculum vulgare</i>)		
#Fenugreek	(<i>Trigonella foenum graecum</i>)		
Five-Spice Powder.			
Garam Masala.			
Ginger	(<i>Zingiber officinale</i>)		
Grains of paradise	(<i>Amomum melegueta</i>)		
#Juniper	(<i>Juniperis communis</i>)		
Lemon Grass	(<i>Cymbopogone citratus</i>)		
#Lovage Seeds	(<i>Levisticum officinale</i>)		
Mixed Spice.			
#Mustard Seeds	(<i>Brassica nigra etc.</i>)		
#Nigella	(<i>Nigella sativa</i>)		
Nutmeg & Mace	(<i>Myristica fragrans</i>)		
#Paprika	(<i>Capsicum annum</i>)		
Pepper	(<i>Piper nigrum</i>)		
Pickling spice			
#Poppy Seed	(<i>Papaver somniferum</i>)		
#Saffron	(<i>Crocus sativus</i>)		
Sansho Powder	(<i>Xanthoxylum piperitum</i>)		
Screwpine	(<i>Pandanus odoratissimus</i>)		
Sesame Seeds	(<i>Sesamum indicum</i>)		
Seven-spice Mixture.			
Star Anise	(<i>Illicium verum</i>)		
#Sumac	(<i>Rhus corioria</i>)		
Tamarind	(<i>tamarindus indica</i>)		
Turmeric	(<i>Curcuma domestica, longa</i>)		

note: all those spices preceded by an '#' can be found in Europe.

15. A LIST OF SOURCES AND LITERATURE CITED IN THE TEXT, WITH A BIBLIOGRAPHIC INTRODUCTION.

Primary sources.

The core of my archival work was to be founded upon the collection of manuscripts entitled 'Casa da Feitoria Portuguesa de Antuérpia' (C.F.P.A. in footnotes) kept in the Arquivo Nacional da Torre do Tombo archives in Lisbon. This includes 8 books that survived the fire of 1755 devastating the archives, then inside the Castelo São Jorge and consists of the following:

- Livro no. 215 (Boek G). A register containing privileges, agreements, sentences, grants (*alvarás*), instructions (*regimentos*) etc. Spans roughly the dates 1411-1736.
- Livro no. 214 (Boek F). A register containing privileges, grants (*alvarás*), letters, acts, contracts, consultations, sworn testimonies, agreements, lists of presents received and given etc. Dates between 1415-69.
- Livros nos. 209 and 212. Registers and accounts of damages done to ships 1535-55 and 1565-1572.
- Livro no. 210. A register of official positions held, agreements, the terms of election of the consuls and deputies etc. Dates between 1552 and 1626.
- Livros nos. 211 and 216. Registers containing agreements, the terms of election of the consuls and deputies and the approval of the factory's expenses, letters, correspondance etc. 1552-1619 and 1626-1788.
- Livro no. 213. Register containing the balance sheets (*balanços*) of the treasurers, debt terms, letters of safe-passage and duty exemption (*cartas de franquia e liberdade*) for foreigners etc. 1578-1662.
- Boxes (*caixas*) 3 & 4. Assortment of documents dating from 1411 to 1810, the great majority relating to the sixteenth and seventeenth centuries.

It soon became apparent that the bulk of this collection would be of more use if I intended to write a purely administrative history of the Portuguese *nação*. In order to fit the Feitoria de Flandres into the wider picture of Portuguese trade, I was obliged to turn to larger collections of archival records within the Arquivo Nacional de Torre do Tombo, specifically the Corpo Cronológico (C.C. in footnotes). An enormous, but undoubtedly the most important mass of documentary material, consisting of much of the day-to-day state correspondance of the Crown. Here we are to find, for instance, many of the letters and *relatórios* of the Antwerp feitors, also as *cartas missivas* copies of commercial contracts negotiated with the Casa da India. Ordered haphazardly, though in rough chronological succession, the collection is divided into three parts, consisting of 120, 373 and 32 bundles (*maços*) respectively, that is a total of 82.902 individual documents. Due to the impossible size of this corpus I was obviously constrained to follow specific leads from given dates, picked up either in secondary literature or from one of the two available bibliographic guides, the *Índice geral dos documentos contêúdos no Corpo Cronológico*, 2 vols. 1843-45 (in alphabetic order up to the letter J), or else the *Sumários do Corpo Cronológico*, 6 vols.; 1 pte., vols. I-III; 2 pte., vols. IV-V; 3 pte. vol. VI. I am aware that these summaries are drawn from an arbitrary choice of documents, nor are they complete.

For much of the quantitative side to Portuguese trade, I exploited the *Cartas de Quitação* (port quitance accounts, and C.Q. in footnotes) drawn up by the Casa dos Contos in Lisbon. Those relating to the reign of Dom Manuel (1495-1521) have been published exclusively in the *Arquivo Histórico Português*: vol. I (1903), pp. 94-6, 163-8, 200-208, 240-248, 267-288, 328, 356-368, 398-408, 447-448; vol. II (1904), pp. 34-40, 74-80, 158-60, 232-40, 349-60, 421-442; vol. III (1905), pp. 75-80, 155-60, 237-40, 313-20, 385-400, 471-80; vol. IV (1906), pp. 72-80, 237-40, 282-88, 364-368, 439-448, 474-480; vol. V (1907), pp. 73-80, 156-60, 235-40, 321-26, 442-46, 472-80; vol. VI (1908), pp. 76-80, 155-60; vol. VIII (1910), pp. 391-414 (index); vol. IX (1914), pp. 433-70; vol. X (1916), pp. 1-16. For the rest, particularly the years of João III's reign, it remains a great tragedy that so few have been found. None remain for the feitorships of Álvaro Vaz, Silvestre Nunes, Francisco Pessoa, Rui Fernandes, Jorge de Barros, Manuel Cirne or João Rebelo. Nor do we have the registers of spice sales so expressly instructed in the Regimento Manuelino of 1509, to be kept 'no arquivo da Casa na presença do feitor, do tesoureiro a de uns dos escrivães' (ch. 131, 105).

I had also hopes to undertake a set-piece of research on foreign trading privileges, scattered across a wide cross-section of locations and archival collections, though with a good number in the *Livros de Chancelaria* (e.g. de D. Manuel, liv. 9, fl. 35; 17, fl. 29; 24, fl. 39; 36, fl. 16v). Most have nevertheless been drawn together by the diligent efforts of generations of historians. Those of the High German merchants have been published in *Arquivo Histórico Português* by J. DENUCE (vol. 7, 1909, 313-5, 310-19, 377-92); incomplete, these need to be supplemented from other collections, principally Vítor RIBEIRO, 'Privilégios de Estrangeiros em Portugal (ingleses, franceses, alemães, flamengos e italianos)', Academia das Ciências de Lisboa. Coimbra (1917), and J.H. CASSEL, *Privilegia und Handelsfreiheiten, welche die Könige von Portugal ehedem den deutschen Kaufleuten zu Lissabon erteilt haben*, Bremen (1771).

It is well known how badly ordered and catalogued are the holdings of the Torre do Tombo archives and documents sometimes carry three or even four different call numbers. Much material, thankfully, has been collected into published series, often a more effective and accessible means of reference. Of those I have or shall

refer to, besides the *Arquivo Histórico Português* (A.H.P. in footnotes) in 9 vols. 1903-12, are the letters of Afonso de Albuquerque (both the series edited by Pato between 1884-98 and Baião in 1942); the letters of João III between 1521-57, ed. J. Ford, Cambridge Mass. (1931); A. da SILVA REGO, *As Gavetas da Torre do Tombo*, 12 vols., Lisbon (1960-64); L.A. REBELLO DA SILVA, *Corpo diplomático português*, Academia Real das Ciências de Lisboa, Lisbon (1862-1910); J.R. COELHO, *Alguns Documentos do A.N.T.T. Acerca das Navegações e Conquistas Portuguesas*, Lisbon (1892); the *Boletim da Filmoteca Ultramarina Portuguesa*, Lisbon: Centro de Estudos Históricos Ultramarinos, (1954-); the *Bullarium Patronatus Portugaliae Regum in Ecclesiis Africae, Asiae atque Oceaniae*, Lisbon (1868); the *Collecção de notícias para a historia e geografia das nações ultramarinas que vivem nos dominios portugueses ou lhes são visinhas*, Lisbon, (1812-41), 7 t.; *Descobrimentos Portugueses. Documentos para a sua história*, ed. J.M. Silva Marques, 2 vols, Lisbon (1944-45); etc.

As far as the culture of consumption is concerned, the written sources, as hinted in the thesis introduction, embrace many different genres of literature. I have dealt with the bibliography of the marvellous specifically in footnote #32 of Chapter 8, but might mention that Marco Polo, Sir John Mandeville, Friar Jordanus, Pierre d'Ailly, Brunetto Latini and the Paris *Livre de Merveilles* served as the principal reference texts. For culinary taste, I assessed medieval preferences from the *Menagier de Paris* c. 1393, published in 1928, the *Tracción española de un manuscrito anonimo del siglo XIII sobre la cocina hispano-maghibi*, (1966), *Un libro de cocina del siglo XIV*, (1935), and *Um tratado de cozinha do século XVI (ms. 1-E-33 of B.N. of Naples)*, (1956), two English treatises (*Ancient Cookery, Form of Cury*) from the end of the fourteenth century, and undoubtedly the most renowned of all, Bartolomeo Platina's *De Honesta Voluptate* (1475). For the new taste emanating from France, I referred principally to Varenne's *Le Cuisinier Français* of 1651 and Massialot's *Cuisinier* of 1691, but Jean-Louis Flandrin has otherwise covered this field magisterially.

Herbals (*herbaria*) served as a good starting point for the culture of consumption, proto-botanical encyclopaedias that developed greatly both in the scale and the specificity of their mapping of the natural world in the period under study; they were given over to describing and usually illustrating the appearance and individual qualities of plants, whether for culinary or medical purposes, or merely as garden plants of beauty. Herbaria were full of common sense, as they derived their credibility from generations of accumulated experience of practical therapeutics from plants locally available. So eastern spices, when they make their rare appearance, are slotted in to the conventional practical tone in which the plants' properties or *virtutes* are related and are stripped of their magic. Herbaria then, are the repository of the body of fact, as oppose to fiction about spices known to sixteenth century Europe, if to the contemporary reader the difference would have been indistinguishable.

The herbals I have had most recourse to include: of manuscript works, the *Secreta Salernitana*, (mid-fourteenth century, Spanish/Provençal provenance), MS. Lod. Pal. 586; Castore Durante's *Herbario Nuovo di C.D., Medico & Cittadino Romano, Configura, che rappresentano le viue Piante, che nascono in tutta Europa, & nell' Indie Orientali, & Occidentali*, Roma (1585); although Dioscorides' *De materia medica* was starting to be published in Latin from as early as 1478, I have referred principally to the translation by Johannes Ruellius (Jean de la Ruelle), *Pedacii Dioscoridis Anazarbei de medicinali materia: libri quinq[ue]. De virule[n]tis animalibus, et venenis cane rabioso, et eorum notis, ac remediis libri quattuor.* ., Paris (1516). Note that a lot of new figures and descriptions were included in updated editions of such old masters, such as the Dioscorides' edition of *De materia medica* that came out in Frankfurt in 1543 and of which a copy is in Bruxelles' Bibliotheque Albert I.

Italian botanists were much more responsive than the German to the widening of horizons with the discovery of new worlds overseas. Thus rather than concentrating on Hieronymus Bock, Otto Brunfels or Leonhart Fuchs, who nevertheless typify a serious devotion to improving the quality of pictorial reproduction, I concentrated on Matthioli's re-reading of Dioscorides *Commentarii in libros sex Pedacii Dioscoridis Anazarbei De medica materia* (1554), Ulisse Aldrovandi's *Storia naturale*, 13 vols., and Antonio Musa Brasavola de Ferrara's *Examen omnium simplicium medicamentorum quorum in officinis usus est*, Rome (1536), an imaginary dialogue between a pharmacist and herbalist regarding all the drugs and grasses known.

For ease of reference, and representative perhaps of the slower-moving mainstream of herbal knowledge, I have taken widely from Gerard's *Herball*, 2 vols. London (1597). Gerard's *Herball* 'became the most popular of all English herbals', if not very original, having pirated a nearly completed translation of Rembert Dodoens (which came out in London as *A new herball*, London: Newton (1586), and usurped most of the illustrations from Jacobus Theodorus' *Tabernaemontanus, Eicones plantarum*, Frankfurt am Main, (1590). The revised edition, prepared by Thomas Johnson and published in London in 1633 is to be considered, in Trease's opinion, 'much superior to Gerard's original work'. Otherwise, the standard English vernacular herbal for the earlier period is *The Grete herball.. whiche geueth parfyt knowlege and vnd[er]standyng of all maner of herbs*, London (1526) pr. by Treueris in 170 folio pages and with 477 woodcuts. Trease considers that this work 'was popular throughout the Tudor period, although medieval and purely utilitarian in outlook'.¹ Mats Rydén, *The English*

¹ TREASE, *Pharmacy in History*, Tindall & Cox, London, (1964), 80.
Halikowski-Smith, Stefan (2001), Portugal and the European spice trade, 1480-1580
European University Institute

Plant Names in the Grete Herball (1526), Stockholm (1984) was useful in conjunction.

Of the 'new' botany, the source material for the demystification thesis presented in Chapter 9, amongst the material referred to extensively includes Charles l'Ecluse, *Exoticorum libri decem, ex officina Plantiniana, Raphalengii* (1605) and H.A. van Rheedee tot Drakenstein (1636-91), the Governor of Malabar, *Hortus indicus malabaricus, continens regioni malabarici apud Indos celeberrimi omnis generis plantarum rariores*, 12 vols., Amsterdam, 1678-93 (1703). This is a ground-breaking text to rank with Orta; it seems the text was supervised by Konkani speaking doctors, and Rheedee used their therapeutic indications of each. As many as 700 plants figure. Elsewhere, it has been praised for the 'general excellence of the plates, which are faithful representations of the plants'.² For the integration of the new drug plants from America, and useful from a comparative point of view, one might cite Nicolas Monardes' *Dos Libros, el uno trata de todas las cosas que traen de nuestras Indias Occidentales.*, Seville (1565), even if it dates from a slightly earlier period, and even if the author never physically went there.

Pharmacopoeia (also known as *dispensatorium* or *enchiridion*) covered the standard formulae for pharmaceutical mixtures, and were often issued by town authorities for pharmacists to follow in the preparation of the mixtures. A good and accessible example of the medieval ascription of spices to certain conditions can be found in Bartels, *Drogenhandel und apothekenrechtliche Beziehungen zwischen Venedig und Nürnberg*, (1966) pp. 18-19, which reproduces text from the *Liber de naturali facultate - daz arzinbuoch Ypocratis*. The standard pharmacopoeia was otherwise the Venetian *Luminare majus* (1496), which was adopted by the City of Nuremberg in 1529, or the *Nuovo receptario* (1499, Florence). The *Dispensatorium pharmacopolarum* by Valerius Cordus was later taken on by the Senate of Nuremberg, where it was republished in 1546; while Basel adopted the *Dispensatorium* of Leonhart Fuchs. These first trans-Alpine pharmacopoeia to be sanctioned by the Nuremberg Senate were also common issue in England, and were innovative for their large numbers of new entries (as many as 500 additions to Dioscorides), including the first accurate descriptions of *simples* such as the *nux vomica*.³ More informal pharmacist's handbooks include Hieronymus' *Apothecarye* (1561); otherwise Nicole Prévost's (Prepositus) *Dispensarium ad aromaticis* (Lyon, 1478-88, published 1528), which describes the simples and 575 composites and includes a comprehensive 'vocabulary'. A very popular translation was made into English in 1588.

Less theoretical, and often a better guide to which spices were actively in use in Europe, are the pharmacy inventories. I have used those of Frankfurt and Nördlingen, published by Friedrich Flückiger, that of a fifteenth century London apothecary, John Hexham, published by G.E. Trease, and those of Transylvania (Sibiu and Braşov) published by Crişan (1996).

But spices also figured in leechbooks, which were practical medical handbooks, encyclopaedias and lexica. There was a wide umbra of para-medical texts, often containing folios of prescriptions for all sorts of afflictions, many of which can not be traced to herbals. One might cite the *Tacuini sanitatis*, illustrated texts conceived as a general manual of health (dietetics), and which emerged around 1380 in northern Italy; see, for example, Luisa Cogliati Arano, *The Medieval Health Handbook: Tacuinum Sanitatis*, (1976). There were otherwise the breviaries of health, such as Thomas Elyot's *The Castel of Health*, London (1534), Andrew Boorde's *The Brevyary* (1541) followed by his *Dyetary of Health* (1542), or even popular almanachs and calendars such as that of Debreceen from 1624 and published by Tibor Komlovski & Béla Stoll, (1976).

Of the commercial information bearing upon the various products which sixteenth century man referred to as spices, and a basis for Appendix 8, one might start with the Appendix to vol. 2 of Wilhelm Heyd's classic *Histoire du commerce du Levant au Moyen-Age*, and as regards the goods exported from India (volumes. place of origin) a list in K.S. Mathew, *Portuguese Trade with India in the Sixteenth Century*, (1983). Further to this, I have drawn on Richard Hakluyt, 'A declaration of the places from whence the goods subscribed doe come', *The English Voyages*, vol. III, 341-; the list of products purchased by Alessandro Magno on his shipping expedition to Alexandria in 1561, published by Frederic Lane in 'The Mediterranean Spice Trade. .'; a list of spices and their elucidation by Rawdon Brown, included in vol. I of *The Calendar of State Papers and Manuscripts relating to English affairs existing in the Archives and Collections of Venice etc.*; the 407-item 'Memoria de las mercaderías que entran en el Reyno que viene de Portugal y Valencia, Cataluña, Aragón, Africa, Florencia, Mylán, França, Flandes, Alemania, Ynglaterra. .', (c. 1548-58); a list of colonial goods and their prices destined for Hamburg in 1592, published by Oliveira Marques as 'Um Preçário de Mercadorias e de Câmbios de Hamburgo' in *Portugal Quinhentista: Ensaios*, (1987), from a document previously published by Richard Ehrenberg in vol. IV, *Hansische Geschichtsblätter*, (1883), 165-70. I have also included the spices registered at the Katzenelnbogener Rheinzollerbe, 1479-1584, Wiesbaden (1981), and those stipulated in the

² see M.J. SINKS. *Indisch Natuuronderzoek*, Kolonial Instituut te Amsterdam, Mededeeling, n. 6, Afdeeling Handesmuseum, n. 2 (Amsterdam, 1915), 14-24.

³ TREASE, *European Universities*, also L. WINKLER, *Das Dispensatorium des Valerius Cordus* (1981), 142-144.

regulations for the retail trade by the Leipziger Rat on 14 December 1582, and included in Gerhard Fischer, *Aus zwei Jahrhunderten Leipziger Handelsgeschichte, 1470-1650*, (1929).

The plant typology used in Appendix 8 was taken from D.J. Mabberley, *The Plant-Book. A portable dictionary of the higher plants*, (1986). A useful compendium summarising the chemical composition and physiological action of Indian drugs, if outdated, is that of William Dymock, *Pharmacographia indica*, Karachi (1890). Also used for corroborative work and nomenclature was the Hobson-Jobson (1886) and its Portuguese equivalent (S.R. Dalgado, *Glossário Luso-asiático*, (1919-21), the English Oxford Shorter Dictionary, and Worth Estes, *Dictionary of Protopharmacology* (1990); also Carmélia Opsomer, §'Les effets médicaux des épices individuelles', in *C.G.E.R.* (1992), 52-3.

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Casa da Feitoria Portuguesa de Antuérpia (C.F.P.A.), livros no. 209-216; caixas 3 & 4.

Corpo Cronológico parte. 1.(a), maços 4, 9, 12, 17, 18, 19, 21, 22, 23, 24, 25, 27, 28, 43, 47, 51, 61, 75, 80, 84; pte. III, maço 13.

Gavetas, II, III, VIII, X, XXI;

Livro V de Místicos, fls. 100b & 105v; fl. 119;

Bullas, m. 20, no. 8;

Chancelaria de Afonso V, liv. 21, fl. 56; liv. 33, f. 46v;

Chancelaria de D. Manuel, liv. XV, fl. 90; liv. XVII, fl. 29; liv. XXXV, fl. LIII; liv. XXXXVI, fl. 13r; liv. XXXVIII, fl. 125r-126r; liv. XLVI, fl. 130v-131r., 155v;

Chanc. de D. João III;

Cartas dos Viceréis da Índia;

Ataide papers;

Col. de São Vicente, vol. III, f. 227;

Manuscritos da Livraria, no. 2253;

Livre de Leis extravagantes, Casa de Suplicação, Casa Forte: estante 1, prateleira 8, no. 26 and Extrav. T.1.f, 166v;

Núcleo Antigo, fls. 99v/100; no. (?) 705.

Arquivo Histórico Ultramarino, Lisbon.

Índia, papéis avulsos. caixa 1.

Biblioteca Nacional, Lisbon.

Arquivo do Conselho Ultramarino, L. 14 de Offícios, fl. 182.

Stadsarchief Antwerp (Archives Communales d'Anvers)

Pk 1070, Natie van Portugal I, 1411-1650

Pk 1071, Natie van Portugal II, 1488-1652

Pk 1074, Losse St. 1575-XVIIde eeuw. Voornamelijk stukken uit het proces A.N. Caldera/Jer. Lopez.

Pk 1011 Costuymen van Antwerpen of which a systematic inventory 'op het Archieffonds van Handel en Scheepvaart' published Antwerp (1925).

Insolvente Boedelskamer, no. 2030.

Requestboek, II (1550), fo. 224 & 332; VI (1563), fo. 25.

Ambachtsboeken (*livres de métiers*), especially 4266 Meerschen/Apothekers (Geb. st. 1499-1794).

Gebodtboeck (*livre des ordonnances*) 1515, fo. 66.

Privilegenkamer. Pk. 3531, Handel: Portuguezen Natie van Portugal, handelsbeurs, Hochstetter.

Scheper-brieven (*dossier marine*) no. 139, fo. 120r (no. 3642), Equipement de navires (no. 5011).

Actes Scabinaux d'Anvers, 1555, 2 Wes. Graph.

Stadsrekening (1550), fo. 485.

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Thésorerie, no. 55.

Archief Plantin-Moretus, Antwerp.

Livre de Caixa, ms. 318.

Archives generales du Royaume de Belgique, Bruxelles.

Chambres des Comptes, nos. 23.469-23.472; série cartons (dossiers), carton no. 326 (Anvers).

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'Relatione del clarissimo messer Federigo Badavaro, ritornato ambasciatore della serenissima republica venetiana da Carlo Quinto et da Filippo rei di Spagna', l'anno MDLVII (1557). MS. no. 6085 bis, fol. 61v; ms IV 1024, fo. 149, cat. 63;

Bibliothèque Nationale, Paris.

André Thevet's *Grand Insulaire et Pilotage* (1586-7), MS fr. 15452-15453.

The Miller Atlas, 1519.

Livre des Merveilles, Paris, Bibliothèque Nationale, ms fr. 2810, c.1410

British Library (Museum), London.

Cotton, Nero, B. I, fol. 19, 64, 74, 146, 151, 160, 220.

'Relação das Nãos e Armadas da India, com os successos dellas. .', ms. 20.902.

Egerton 747 ms. (the first of the post-Late Antiquity herbals and the originary of the *Tractatus de herbis* genre)

Public Records Office, London.

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