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Cartography and Production of Space:  
a Challenge for the Historian

Valeria Pansini



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a Challenge for the Historian*

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## **Abstract**

Cartographic sources have been used to support the role of “imagination” and “invention” in the production of spaces and locality. Their role as instruments of power and producers of order has been underlined inside the specialised field of the history of cartography, but also in front of a wider attendance of historians. However, the direct and apparently readable character of the map still leads to naive interpretations, and the overwhelming role of “power”, used as the almost unique category of analysis, produces equivalent simplification. The aim of this paper, written in form of notes, is to show in new terms the potential of cartography for the historian. It will focus on the multiplicity of entries needed for a proper interpretation of a cartographic source; it will show how the use of maps creates a necessity, and a welcome occasion, for the historian to be reflexive; it will finally suggest some advantages and risks of the introduction of temporal dimension in new cartographic representations.

## **Keywords**

Cartography, historiography, locality, sources, GIS.



*Cartography and Production of Space:  
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VALERIA PANSINI

Max Weber Post-Doctoral Fellow (2006-2007)  
European University Institute, Florence, Italy

In the last twenty years, new and important approaches have been applied to long studied processes, such as the birth of nation-states. Eurocentric categories and perspectives have been deconstructed and a new emphasis put on the concepts of 'imagination' and 'invention', following the path traced by Benedict Anderson, Eric Hobsbawm and Terence Ranger. Parallel to this, contributions coming from anthropologists and geographers, from local history and microstoria opened up a different vision, on a larger scale, of how places and locality could be produced, formed, limited and named. Cartography as a source has come to play an increasing role in this changed context. Appreciated by some as a materialisation of the processes of invention, by others as a precious way to reconstruct local practices, it has even sometimes been considered as the most direct and useful of the sources, in short, it has become more and more appealing. Meanwhile, in the specialised field of the history of cartography, the object was submitted to a complete reanalysis, covering technical considerations, semiotic studies, and post-modern suggestions. These multiple and productive approaches have only rarely been considered together. The potential for hist-

-orographical reflection of the study of maps, in a combined perspective considering them as both sources and objects for the historian, has not yet been fully exploited. The aim of this paper is to put together the different and fruitful approaches I have outlined, and the particular case of cartography, so as to show how this connection allows us to touch fundamental issues for research in social sciences: how we deal with sources, and include or not the analysis of their production in our approach; how we define the categories of reference of our objects, and include both space and time as significant and not linear dimensions; how locality and space can be produced and defined; and how our work as researchers finally acts in the same processes by which locality and space are produced and defined.

I am deeply indebted to all the participants of the workshop *Myths and Maps of Europe*, and in particular to Bernhard Struck: our discussions have nourished these pages, the responsibility for which is mine alone.

### **Order and Power**

A finished modern map is an ordered, neat, still object. Borders are usually defined as linear, surfaces are continuous, and the material reality of things becomes handy. Maps seem to put things in order: they have certainly been used for this purpose, to give a quiet image of much more confused situations. The interest of historiography in the processes by which this operation of ordering was accomplished is relatively recent. J.B. Harley highlighted with emphasis the role of power in the making of maps, and called for a specific reading of the cartographic source (Harley 1988). Influenced by Foucault, Harley applied the link between power and knowledge to the study of maps, and arrived at forceful and peremptory conclusions: 'as much as guns and warships, maps have been the weapons of imperialism' (Harley 1988, p.57). The legitimising character of cartographic representation was thus put at the centre of the historian's attention, and the ordered image was faced with the distortions it bore, whether they were deliberate or unconscious. Harley also questioned the rhetoric of accuracy, 'the new talisman of authority', that gave an even stronger character of faithful representations of the world to maps from the 18<sup>th</sup> century onwards. This criticism, however, did not follow a complete path to deconstruction, as some commentators would have wished (Beylea 1992). In some sense, the map was still for Harley an image of the world, even if strongly distorted by conscious extra-scientific intentions, or by unconscious influences of the society for which it was produced.

We should be aware of what was suppressed in a historiography of order (Dirlik 2005). Harley's work opened up this awareness for the study of cartography, forcing historians to ask new questions of the maps, and to go beyond the apparent ordered image the documents offered. Still, this renewal affected much more the studies in the history of cartography, that is the studies of maps as objects, than the general approach to maps as sources. We are still looking at maps as the documents that can clarify our confused perception of past realities. The map still stabilises: its legitimising power is still present for historians. Cartographic representations are strong and tempting: being aware that our task is to use the sources to understand the past while never trusting them completely, the visual image, the immediate one, the map that appears as readable and direct, can represent the long desired resting point. It is tiring to face disorder, especially when we have to report on it. It is soothing to trust a source, and it is easier to do so when we don't fully control the techniques with which it was produced. We can't trust a written text, but we can consider zenithal and north oriented maps as an almost natural

and sincere way of representing space. Cartography thus takes on the role of the consensual category that covers and pacifies (on how the concept of 'landscape' has also played this role, see Sampieri 2006). Maps become data, more than sources, and the new software that allows us to treat them as such complete the illusion<sup>1</sup>.

The image of the ingenuous use of maps that I have just given is of course exaggerated, but more subtle visions of historical processes can lead to the same 'reconstruction' of order. The use of power as the fundamental and almost unique category of analysis finally produces another ordered and linear interpretation of the source. By writing that 'maps are prominently a language of power, not of protest' Harley indicated a direction that was largely and not always fruitfully followed. The multiple issues that can be at stake in the production and use of a map are covered when looked at through the monopolising lens of power. No critical study of historical maps was possible without including 'power' as a category of analysis, but no research can effectively give account of the complexity of the cartographic object while giving absolute priority to only one category, even one as important as 'power'.

I will use the example of borders and of their cartographic transcriptions to show the need for a complex and multidirectional approach. The definition of administrative borders, whether internal (between two provinces submitting to the same central power, for instance) or external (marking the limit of two distinct authorities) usually created a large amount of documentation (including cartographic records), increasingly important in the case of conflicts. During major processes of the reform of administrative units (the subdivision in 'départements' of revolutionary France is a clear example, see Ozouf-Marignier 1989) rules are explicitly established, upon which the tracing of new borders has to be based. In other contexts of more gradual change rules are less explicit and therefore less evident to the historian, but still present in the mind of the actors who use them and abuse them in the case of conflict. Power is in the rules. But references to equally legitimate regulatory concepts can be contradictory. Natural borders have been considered the ideal solution for the solving of conflicts and even for the provision of peace, by the strength of their evidence that forces consensus. But a border has to be permanent, and a human artefact can be more permanent than a natural feature, a channel is more stable than a torrent (Pansini 2007, Raggio 2001). At the beginning of the 19<sup>th</sup> century, the wish for a more 'rational' administration and system of taxation stimulated projects of territorial reform, often led by a pragmatic spirit. The administrative centres were to be within easy reach, and therefore both the geometric principle and the reference to natural borders were used. The parties in the suit made use of these criteria and of their contradictions, bending the rules and referring to other implicit but no less legitimate issues, like custom, the ancient nature of the administrative unit, the economic importance of urban centres. Cartographic documents were made and used in conflicts by the different parties: they highlighted, and sometimes distorted, the most convenient divisions, showing the strong capacity of local communities to interpret and adapt the rules that were imposed by the central power, and to choose the most legitimate argument for a precise case. On a different scale, issues changed but the methods remained the same: Sturani (1998) studied small scale maps of Italy during the national unification period, and showed how the rhetoric of natural borders was used, and even preferred to the criterion of the ancient character of

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1 For an example, see the catalogue of the ECAI project at <http://ecaimaps.berkeley.edu/clearinghouse/> where different historical maps can be visualized and superimposed.

'Italy' as a geographical unit, traceable to the Roman Empire. It would be pointless to deny any material reality to natural borders, and stress the role of 'invention' in the choice of the line that has to be considered as the 'natural' one. Natural limits, as well as human artefacts inscribed in the territory, form the corpus of available references, together with geometric principles of distance, historical legitimisation, and others. This corpus has to be historically reconstructed in order to understand the uses that were made of it, and the practices, including cartographic ones, that rose from these uses. Natural, geometric, ancient references were in fact exploited by all the parties, by the central governments and by local communities, in local or national conflicts: at all levels, they took part in conscious processes of invention, in aggressive operations of conquest, as well as in sincere efforts of effective administration. There is no unique direction for the exercise of power, and there is no typical scale for a definite process. Cartographic documents have been inscribed since their production in multiple logics, are used and displayed afterwards for different purposes, following different influences, and sometimes assuming different meanings. Our analysis of these documents cannot escape this multiplicity of entries. By considering maps as simply ratifying or strengthening conscious and powerful operations of construction, we risk ignoring their generative potential and denying ourselves the tools to observe unconscious and progressive change in space and in its transcription. A multidirectional approach is needed to analyse the processes by which space and localities were produced, and the way in which cartography was submissive or operative in these processes of production.

### **Producing space and locality: suggestions for reflexivity**

Although no particular process can be strictly attributed to a precise scale level, some processes become evident only when observed on a large scale. By linking the observation of historical maps to the study of the social processes that caused their production, and to the practices that were carried into effect to get to the cartographic result, a fruitful path can be followed for the understanding of the production of space and locality, at every level of analysis. However, local studies of cartography have long been dominated by an antiquarian spirit, for the sake of local curiosity more than for the understanding of social processes. In *Storia di una storia locale* (1996), Edoardo Grendi clearly distinguished between a local history whose original reference was the school of Leicester and the English Local History (Phythian-Adams 1993), which applied a critical framework to its objects, and the 'storia patria', largely present in Italy, whose intent was principally classificatory. The topographical approach, to be used by the historian as it was by the surveyor, was considered a proper antidote to the conceptual poverty of pure classification. It allowed for the gathering together in the same analysis both people and things, the materiality of space and local resources and the social processes that were aimed at managing them. With reference to the locality, the historian and the surveyor are both 'universal scholars': everything is for them potentially interesting and correlated: people, woods, hills, fields, rituals.

Thanks to the topographical scale, rich suggestions for reflexivity are introduced: both the surveyor and the historian, while inquiring into local processes, are carrying out operations of naming and of limiting that are strictly inherent to their practice, and that finally lead to the production of locality. They take an active though not always conscious part in the processes they are studying. Appadurai (1996) makes a parallel reflection on ethnographical observation: ethnographers are actively producing locality, which they take as given and by-pass the analysis of the operations that are at

its origins. The chronological distance should apparently save historians from this risk: their inquiry into processes that are supposed to be finished should prevent them participating in the action. Still, since direct observation is impossible, our entry into the matter is always through sources which were produced under specific conditions. Having to account for the genesis of these sources and their interpretation, the historian ends up by participating in the same process which names, limits, and finally produces locality, unprotected by chronological distance (Torre 2002). The account of the genesis of the sources, which is fundamental for any historical work, is an absolute necessity when dealing with cartographic production: the risk in presupposing the transparency of the source is in fact higher in the case of maps. David Woodward's pioneer article of 1974 suggested a scheme of analysis of map documents which considered their multiple possible entries (production, purpose and different uses), and which at least partly enable an account of the genesis of the source in question.

In Grendi's programme, the topographical approach was the tool used to unify territorial surveying and temporal perspective. This unified observation still has a large and unexplored potential to apply to the study of maps: certainly referring to spatial features, maps are normally interpreted as offering only this kind of information, unless inserted in a coherent series. In the following section I will gather together different reflections on temporality in the cartographic medium, to draw from them useful suggestions for historiography.

### **Diachronic maps: the acceptable challenge**

Geographers and historians have tried, with inconsistent interest, to insert the fundamental dimension that was not their principal in their object and practice of research. To bridge the gap between the two disciplines (Baker 2003) it is necessary to open new variables: it is necessary for the geographer to stop considering time as a simply linear dimension, and for the historian to allow space a more active role, which would be different from the fixed, the eternal, the stable one that it is still so often considered. What is at stake in both cases is the status of change, and the categories that can be used to study it. For Braudel, space was par excellence the dimension of the 'longue durée', where change could only be slow, almost imperceptible. More recently, a group of French geographers (Gautier EPESS 2000) has tried to conceptualise the 'event in space' as a category, and by doing this to create a framework to analyse relatively quick changes in spatial systems. If their approach has some faults, such as the lack of a proper differentiation between 'event' and 'process', it has the great merit of opening up the problem, and proposing a highly needed platform of discussion, open to historians, on the common object of the disciplines. In fact, if we follow David Harvey (2001), the relevant category for geography is not space, but space-time, or spatio-temporality. And this could not be identified otherwise than as a common object, for historians and geographers, in which space is not the passive framework, but a dynamic, active moment.

If space is active, how can we consider consciously produced cartographic documents as still and passive? The phantasm of the map as an ordered, neat and clear object appears again: no time, no variation, no doubt. But which framework of observation can we apply to cartography, in order to read in it more than this still image that seems to firmly occupy our vision? How can we use cartographic documents to see the event in space, to touch the process in motion, to allow disorder in our well-built scheme? Certainly it is not immediate, and the analysis often abandons this path to

follow quieter directions. The rigid framework that 'orders' maps in our perception, which we sometimes call intuitive when it is in fact highly constructed, forces the direction to be taken. Among other causes, this timidity is due to the fact that we agree only superficially with the issue of the multiplicity of spatialities and temporalities that was brought to us by World History studies, and that historians of science are touching when studying cultural transfers. To assume spatialities and temporalities as multiple would mean to go further than the already interesting studies on spatial systems that introduce different temporal scales to follow the perception of the actors (Carré 2002). It would mean fully acknowledging the possibility, from both the historical and the geographical points of view, of different ways of perceiving and representing space and time, and of drawing the theoretical consequences of this idea. Once the anthropological postulate of difference is established, our task would be none other than to reconstruct this 'other' way of jointly perceiving and representing space and time. Early modern maps are one sign among others of these different spatialities and temporalities, connected or not to each other, and not necessarily ordered in systems. The reconstruction of different terms of representation could lead us to recognise the presence of time in a single cartographic document, without the insertion in a series, as Gilles Palsky (1996) showed for Napoleonic maps of battles.

In our time, attempts to introduce the temporal dimension in the GIS have largely been accomplished. The aim is mainly to manage and introduce in GIS growing volumes of spatio-temporal data, so as to support with an increasingly powerful instrument the researches of social scientists (Kelly-Knowles 2000). The temporal dimension of reference is linear, even if some very interesting attempts (Halls et al. 2000) are made to formalise a theory, applied to GIS, in which points of change are identified, and these allow for the tracing of particular temporal geometries. However, old problems often survive in new techniques. Temporal GIS don't escape the question of borders, whether its users are conscious or not of the conceptual problems that are linked to it: according to Langdan (1992) the definition of linear limits in time, on the model of the well established representation of limits in space, is necessary for the introduction of temporal data in GIS. The reference, of course, is to a continuous clock time, upon which a chosen line is traced to make representation possible, because, as seems clear, linear limits creating contiguous and continuous zones are essential to our modern western way of conceiving cartography.

There is a strong need for conceptual thought on the use of this new temporal GIS technique, as acknowledged by the specialists of the field (Kelly-Knowles 2000). The problem is that diachronic cartography can be strongly anachronistic. There are some trends that are inherent to the instrument and that a proper reflection could control, which are more or less the same as in an historical atlas. But temporal GIS representations tend to diminish the differences between the nature of limits in a much more complex and powerful way, and to render time and change as linear and continuous. The definition of a coherent series of data to be introduced into the system always constitutes a problematic issue, but the risk of projecting a completely constructed coherence increases, as I have already shown, with cartographic documents. Historical maps are not databases, and therefore they cannot be superimposed or introduced in a series without a proper analysis of the modes of their production<sup>2</sup>. A map is not only a source, and a source is not only a data-provider. Of course, the joint

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<sup>2</sup> *Ibid.*

observation of historical maps, made possible with modern techniques, is an occasion that cannot be lost, and that opens up great possibilities for the study of change in spatial systems. However, a series built on a strictly linear perception of time, and with no conceptual oversight, risks nullifying the potential of this observation, by diluting unified and significant documents in a mass of information that becomes impossible to verify, and therefore scientifically useless.

### **Conclusions**

The history of cartography should definitively and generally be open to the questions that have been exciting the debate among historians of science over last two decades, and that have led to new and fruitful perspectives of research. A decisive entry of the cartographic dimension into the history of science debate, besides bringing an important contribution to it, would definitively deflect the discipline from the antiquarian field, and position its critical framework in broader issues.

The practices of surveying, measuring, drawing and mapping are scientific practices. By defining them as such, we mean that in these practices it is possible to identify a proper inner functioning and specifically theoretical aims that cannot be directly traced back to the social economic context<sup>3</sup>. Historical practices have a legitimising function (Torre 2002): they found the meaning of actions, they create the legitimacy of those who exert them, and of the institutions that register them. This function keeps its validity in the case of scientific practices, with the important addition of another legitimacy, the theoretical one. In writing this paper, I am surely declaring my legitimacy to write on these matters and to make the fruit of my work public. However, my aim is not limited to this relational and social necessity: I am sincerely trying to contribute to the debate, and to understand the potential of reflections on cartography for the historical discipline. Without considering the theoretical validity as transcendent, we still have to analyse it in an appropriate and differentiated framework that can give answers within its particular logic. We still have to consider, in a cross-disciplined way, the different legitimacies and the different logics in which cartographic practices are inscribed.

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<sup>3</sup> Of course, in a fully constructivist perspective this definition would not be accepted. But the opposition would refer to all scientific disciplines, and not to cartography in particular.

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