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**Expansionist Intellectual Property Protection
and Reductionist Competition Rules:
A TRIPS Perspective**

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EXPANSIONIST INTELLECTUAL PROPERTY PROTECTION AND REDUCTIONIST COMPETITION RULES: A TRIPS PERSPECTIVE

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INTRODUCTION

While the “preservation of public goods” as such is not a typical role for competition law,¹ the application of this body of law to so-called knowledge goods presents particularly complex issues. Knowledge does not fit neatly into a framework of analysis that treats property as either private or public. Because knowledge is nonrivalrous in character, anyone may adopt it for his or her own individual purposes in the raw state of affairs.² The state may accordingly decide to stimulate the creation of knowledge by providing private parties with legal means of appropriating it, as for example, by laws protecting trade secrets and confidential information, by enforcing contractual agreements, or by enacting the exclusive rights of intellectual property regimes. In that event, competition law intervenes to ensure that private parties do not either jointly or individually, by the exercise of market power, extend that appropriation beyond the limits allowed by law.

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¹ As a rule, one cannot contractually exclude private competitors from access to public infrastructure facilities, although the status of radio and broadcast frequencies presents a borderline case. However, competition may intervene in the reverse situation by insisting that certain private property must be made accessible to competitors under the “essential facilities” doctrine. This doctrine has lately attracted considerable attention because so many infrastructure facilities have become privatized. See German Act Against Restraints of Competition of August 26, 1998 (GWB), v. 26,7,1998 (BGBl. I S.2546) § 19 (4) [hereinafter GWB]. The literature on the doctrine is abundant. See e.g., W. Möschel in *GWB-KOMMENTAR ZUM KARTELLGESETZ* § 19, annot. 178, 186 et seq. (U. Immenga et al. eds., 3d ed. 2001) (for Sect. 19 (4)); Doherty, *Just what are essential facilities?*, 38 COMMON MKT. L. REV. 397 (2001) (for European Community law).

² For the public good nature of knowledge and its economic consequences see Paul David, *Koyaanisquatsi in Cyberspace: The Economics of an Out-of-Balance Regime of Private Property Rights in Data and Information*, in *INTERNATIONAL PUBLIC GOODS AND TRANSFER OF TECHNOLOGY UNDER A GLOBALIZED INTELLECTUAL PROPERTY REGIME* (Keith Maskus & J. H. Reichman eds., Cambridge U. Press, forthcoming, 2004).

Competition law thus responds to fears that private ordering might otherwise unduly encroach on what ought to remain a free resource for independent innovation or that it might transform the process of appropriating knowledge into actual control of markets. In so doing, competition law performs a critical but rather traditional role, one that concerns the much discussed interface between the protection of intellectual property laws, whose exclusive rights seem to confer legal monopolies, and free intra-brand competition.³ The major goal here is to safeguard the incentive and reward rationales of intellectual property protection while at the same time controlling the risks of an undue extension of legal exclusivity. Its doctrinal and jurisprudential approach has shifted over the years from immunizing IPR-based restraints on trade from antitrust challenges to subjecting the exercise of IPRs to the general rules of competition law as they apply to any property-related restraints of competition.⁴

In this article, the IPR-antitrust interface is considered only to the extent that it is reflected in the competition rules embodied in the Agreement on Trade Related Aspects of Intellectual Property Rights of 1994 (“TRIPS Agreement”).⁵ The TRIPS Agreement expressly addresses some of the better known methods by which IPRs may be abused in order to secure a private appropriation of public goods. For example, this sometimes occurs when rights holders impose “no challenge” clauses in licensing agreements.⁶ Parts I and II of this article discuss this general topic from both the domestic and international perspectives.

3 See Mark D. Janis, *Minimal Standards for the Patent/Antitrust Interface under TRIPS*, in INTERNATIONAL PUBLIC GOODS AND TRANSFER OF TECHNOLOGY UNDER A GLOBALIZED INTELLECTUAL PROPERTY REGIME, *supra* note 2.

4 For a general discussion of the development of the law, see N. Gallini & M. Trebilcock, *Intellectual Property Rights and Competition Policy: A Framework for the Analysis of Economic and Legal Issues*, in COMPETITION POLICY AND INTELLECTUAL PROPERTY RIGHTS IN THE KNOWLEDGE-BASED ECONOMY 17, et seq (R. Anderson & N. Gallini eds., 1998); W. Tom & J. Newberg, *U.S. Enforcement Approaches to the Antitrust-Intellectual Property Interface*, in COMPETITION POLICY AND INTELLECTUAL PROPERTY RIGHTS IN THE KNOWLEDGE-BASED ECONOMY, *supra*, at 343 et seq.; Hanns Ullrich, *Intellectual Property, Access to Information, and Antitrust: Harmony, Disharmony, and International Harmonization*, in EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY: INNOVATION POLICY FOR THE KNOWLEDGE SOCIETY, at 365 et seq (Rochelle Dreyfus et al., eds. 2001) [hereinafter EXPANDING THE BOUNDARIES OF IP]; A. HEINEMANN, IMMATERIALGÜTERSCHUTZ IN DER WETTBEWERBSORDNUNG 24 (2002).

5 Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization [hereinafter WTO Agreement], Annex 1C, Instruments—Results of the Uruguay Round, at Arts. 8(2), 40, 33 I.L.M. 81 Arts. 8(2), 40 (1994) [hereinafter TRIPS Agreement].

6 TRIPS Agreement, *supra* note 5, art. 40.2.

We must also consider the extent to which the TRIPs provisions on competition law apply to phenomena typical of the "new economy," in which IPRs have led to an ever broadening privatization of intangible public goods.⁷ One question, for example, is what the TRIPs Agreement might say about the use of certain intellectual property as an "essential facility"⁸ or as a "raw material" or interface⁹ for access to various peripheral and after-markets. Because legislators often fail to properly define the limits of exclusive property rights,¹⁰ the exercise of these rights in new situations, and especially with regard to new technologies, attracts scrutiny under competition law, with a view to preventing anticompetitive market foreclosure. This topic is discussed in Part III of this article.

Still other questions concerning the impact of the TRIPs Agreement merit attention. One is whether the competition rules in that Agreement cover the many roles that technological property¹¹ now play with regard to innovation that affects both the new economy and the broader economy in general. Another question is whether the TRIPs Agreement's rules on competition adequately reflect modern policy approaches to innovation-related restrictions on competition, which tend to favor the creation rather than the diffusion of new technologies. These questions are also addressed in Part III of this article.

Because both old and new approaches to competition policy vary from country to country, there is a further question of how to deal with such diversity. To the extent that the TRIPs Agreement promotes a globally harmonized intellectual property

⁷ See, e.g., Case C-241/91P & Case C-242/91P, RTE, ITP v. Commission, 1995 E.C.R. 743 (*Magill TV Guide*).

⁸ See *supra* note 1; see also Helmuth Schröter, in *KOMMENTAR ZUM EUROPÄISCHEN WETTBEWERBSRECHT* Art. 82, annot. 263 et seq (Helmuth Schröter et al. eds. 2003).

⁹ See *Magill TV Guide Case*, *supra* note 7.

¹⁰ For the controversies surrounding the decompilation rule of Article 6, EC Directive of May 14, 1991 on the legal protection of computer programs, OJEC 1991 L 122, 42, see J. SCHNEIDER, *HANDBUCH DES EDV-RECHTS*, 254 et seq., 391 et seq., 568 et seq. (3d ed. 2002); X. LINANT DE BELLEFONDS, *LE DROIT DE DÉCOMPILATION DES LOGICIELS. UNE AUBAINE POUR LES CLONEURS?*, JCP 1998 I 118 (P. 479 et seq.). As regards database protection, the legislator was so worried about the anti-competitive potential of its own law that it provided for a specific monitoring rule. See Art. 16 (3) EC Directive 96/9 of March 11, 1996, on the legal protection of databases, OJEC 1996 L 77, 20 [hereinafter EC Directive on Databases].

¹¹ This article focuses on what I shall call "technological property", which includes patent (or utility model) protection for inventions, trade secret law, design protection for the non-technical features of technical products, and copyright protection for computer programs and databases, as well as *sui generis* database protection.

regime while leaving competition policy to the sovereign determination of Members and their regional economic institutions, the key issue is not which competition policy is best or even adequate. Rather, it is how international public goods—more precisely, an inherent international public good such as knowledge—may be preserved under a patchwork transnational regime rooted in a multiplicity of national and regional competition laws. This issue raises not only problems of conflict avoidance and conflict resolution, but ultimately it affects the international harmonization of IPR-related and/or innovation-related competition law and the role that the TRIPS Agreement may play in this regard. These topics are discussed in Parts III and IV below.

I. NATIONAL COMPETITION RULES AND THE TRIPS AGREEMENT

The TRIPS Agreement does not introduce its own rules of competition law, but instead authorizes Members to establish or maintain such rules. This reservation in favor of Members' sovereign competition policy represents a concession that the industrialized countries made in response to an earlier effort by developing countries to enact a Code of Conduct for the Transfer of Technology.¹²

A. Points of Departure

Article 8.2 of the TRIPS Agreement states, as a "Basic Principle," that "Appropriate measures, provided that they are consistent with the provision of this Agreement, may be needed to prevent the abuse of intellectual property rights by right holders or the resort to practices which unreasonably restrain trade or adversely affect the international transfer of technology."¹³ This principle is given greater specificity in

¹² See D. GERVAIS, *THE TRIPS-AGREEMENT: DRAFTING HISTORY AND ANALYSIS*, sub. 2.48, 2.182 et seq. (1998); Thomas Cottier, *The Prospects for Intellectual Property in GATT*, 28 COMMON MKT. L. REV. 383, 409 et seq. (1991); P. Roffe, *Control of Anticompetitive Practices in Contractual Licenses Under the TRIPS Agreement*, in *INTELLECTUAL PROPERTY AND INTERNATIONAL TRADE - THE TRIPS AGREEMENT* 261, 278 et seq. (C. Correa & A. Yusuf eds. 1998) [hereinafter *INTELLECTUAL PROPERTY AND INTERNATIONAL TRADE*]. The developing countries had unsuccessfully proposed a Code of Conduct for the Transfer of Technology. See e.g., Pedro Roffe, *The Unfinished Agenda*, in *INTERNATIONAL TECHNOLOGY TRANSFER: THE ORIGINS AND AFTERMATH OF THE UNITED NATIONS NEGOTIATIONS ON A DRAFT CODE OF CONDUCT*, at 381 (S. Patel, P. Roffe & A. Yusuf eds. 2001) [hereinafter *INTERNATIONAL TECHNOLOGY TRANSFER*].

¹³ Part I of the Agreement is entitled "General Provisions and Basic Principles;" Sect. 8 is entitled "Principles." TRIPS Agreement, *supra* note 5, art. 8.2.

Part II, entitled "Standards Concerning the Availability, Scope and Use of Intellectual Property Rights", in which Section 8 deals with "Control of Anti-Competitive Practices in Contractual Licenses." This section consists of a single article—article 40—which covers both matters of substance¹⁴ and of procedure.¹⁵ There are no other rules pertaining to competition law in the TRIPS Agreement except for a provision allowing Members to impose compulsory licenses on intellectual property owners in order to remedy anticompetitive practices.¹⁶

Taken together, Articles 8.2, 40.1 and 40.2 may be viewed as both broad and narrow in scope. The provisions seem broadly applicable to restrictive practices relating to all the different intellectual property rights that the TRIPS Agreement covers, although both the legislative history and the examples given in Article 40.2 focus primarily on the licensing and transfer of [patented?] technology rather than on trademark or copyright licensing.¹⁷

At the same time, these provisions are only concerned with the abusive exercise of intellectual property rights and with certain licensing practices and conditions. In this sense, both unilateral and bilateral IPR-related conduct of an anticompetitive nature is covered. A further distinction is then made between restrictive practices affecting licensing in general and those bearing on technology transfer in particular. However, other potentially anticompetitive arrangements, including mergers and acquisitions, which are more generally innovation-related, are left outside the reach of the TRIPS Agreement. The consequences of these distinctions, and of this self-imposed limitation, will be discussed later.

B. Principles

Three guiding principles emerge from the competition rules set out in the TRIPS Agreement. There are, first, the reservation of IPR-related competition policy to

¹⁴ TRIPS Agreement, *supra* note 5, art. 40.1, 40.2.

¹⁵ *Id.*, art. 40.3, 40.4.

¹⁶ *Id.*, art. 31(c), (k). Issues of procedure and remedies regarding antitrust violations are beyond the scope of this article.

¹⁷ A conceivably broader reading of "package licensing", as mentioned in the TRIPS Agreement, *supra* note 4, art 40.2, could also cover copyright exploitation by way of block-booking; and "no challenge" clauses may likewise be read so as to cover delimitation agreements in trademark law. However, Article 40.1 suggests the narrower understanding stated in the text.

sovereign national determination; second, a requirement of consistency between national IPR-related competition policy and the TRIPS Agreement's principles of IP protection; and third, there is a concern to primarily target practices restricting the dissemination of protected technologies.¹⁸

1. National Antitrust Control over the Exercise of Domestic IPRs

The reservation of IPR-related competition policy to sovereign national determination directly results from the very wording of Articles 8.2 and 40.2 of the Agreement. Reading them together, as consistency requires, these provisions tell us that the measures Members may take (under Articles 8.1 and 8.2), in the form of domestic legislation (under Article 40.2), are those that may be needed to prevent abuses and restrictive practices.¹⁹ There is hardly any prescription made as to the nature or content of such measures, the procedural mechanisms for controlling restrictive practices, or the eventual remedies. The only substantive condition of importance is a systemic one: Articles 8.2 and 40 recognize the Members' "interventionist" powers to control certain practices only if they produce demonstrably negative effects on trade, competition, or the transfer of technology.²⁰

a. Regulatory Standards

The regulation of technology transfer is not limited to restrictive practices, nor is a member that takes steps to control such practices obliged to evaluate them under a "rule of reason" analysis.²¹ When negotiating the TRIPS Agreement, leading

¹⁸ For a more technical analysis, see UNCTAD & ICTSD, TRIPS AND DEVELOPMENT--RESOURCE BOOK, PART THREE: INTELLECTUAL PROPERTY RIGHTS AND COMPETITION (2003) available at www.iprsonline.org/unctadictsd/docs/RB_3_Cometition/pdf [hereinafter UNCTAD & ICTSD, RESOURCE BOOK].

¹⁹ TRIPS Agreement, *supra* note 5, arts. 8.1, 8.2, 40.2.

²⁰ See *e.g.*, UNCTAD & ICTSD, *supra* note 18, ¶¶3.1.1, 3.2.1 (stressing that, while these provisions employ different language, they must be read in a consistent manner); see also H. Ullrich, *Competition, Intellectual Property Rights and Transfer of Technology*, in INTERNATIONAL TECHNOLOGY TRANSFER, *supra* note 12, at 363, 365 et seq. In particular, it suffices that technology transfer is "affected" (Art. 8.2), it need not be literally "impeded" (Art. 40.1).

²¹ Put differently, the restrictive nature of a technology transfer agreement is made a necessary

Members (such as the European Union) still subjected some restrictive licensing practices to a type of *per se* rule, thus holding them *a priori* unreasonable. While these delegations were probably not keen about introducing such rules into the TRIPS Agreement, they could hardly ignore *per se* restrictions in their own domestic laws.²²

Likewise, Article 40.2 expressly refers to certain pernicious practices only as illustrative examples; hence it indicates no more than a threshold level of regulation. Members thus retain broad leeway to impose more sophisticated competition rules, provided that they are sufficiently specific.²³

Finally, by virtue of an *argumentum e contrario* from the consistency requirement, Article 8.2 recognizes that Members have broad authority to define what may constitute an abusive unilateral exercise of intellectual property rights.²⁴ The power to regulate abusive licensing practices is then expressly conferred by Article 40.2.

b. Is There a Duty to Regulate?

Articles 8.2 and 40.1 differ in that the former provision is limited to recognizing the need to prevent abuses and restrictive practices²⁵ while the latter declares the

connecting factor for its control, but not a factor determining the outcome of the control. See UNCTAD/ICTSD, Resource Book, *supra* note 18, 3.1.1(d), 3.2.1(b, iii); Ullrich, *supra* note 20, at 366 et seq. Note that Art. 7, TRIPS Agreement, elevates technology transfer to an objective of the Agreement. For the distinction between the “competition approach” and the “technology transfer” approach to technology transfer, see P.-T. Stoll, TECHNOLOGIETRANSFER - INTERNATIONALISIERUNGS- UND NATIONALISIERUNGSTENDENZEN, (1994), at 365 et seq.; G. Cabanellas, ANTITRUST AND DIRECT REGULATION OF INTERNATIONAL TRANSFER OF TECHNOLOGY TRANSACTIONS, (1982), at 157 et seq.

²² See E. Fox, *Trade, Competition, and Intellectual Property—TRIPs and its Antitrust Counterparts*, 29 VAND. J. TRANSNAT'L. L. 481, 492 et seq. (1996). Obvious examples are horizontal or vertical price fixing, quantity restrictions, and absolute territorial segregation of markets even under the reform proposals for IPR-related competition policy in the EU. See Commission Evaluation Report on the Transfer of Technology Block Exemption Regulation No. 240/96, No. 186, 187, 2001 O.J. (C 786) [hereinafter Commission Evaluation Report on the Transfer of Technology], available at http://europa.eu.int/comm/competition/antitrust/technology_transfer.

²³ National competition law must specify either by statute or by administrative or judicial practice the types of licensing practices or conditions that may be subject to control; in view of the different legal traditions of Members, the provision may not be read to mean that IPR-antitrust control can be exercised only on a case-by-case basis. See UNCTAD & ICTSD, *supra* note 18, 3.2.1 (c) (i).

²⁴ For example, abuse may exist in case the IPR holder has either absolute or only relative market power, and it may even be held to exist in the absence of any proof of market power. Dysfunctional use or misuse in general is covered by Art 8.2.

²⁵ TRIPS Agreement, *supra* note 5, art. 8.2 (“... may be needed to prevent”).

Members' unanimous and affirmative opinion that "some licensing practices or conditions ... which restrain competition may have adverse effects..."²⁶ Article 40.2 then gives illustrative examples of such practices. In view of the generally recognized pernicious nature of the examples listed, one might conceivably argue that the difference of wording means that, under Article 40.1, Members obliged themselves to actually control these practices.

These provisions could thus constitute some sort of a platform for the minimum harmonization of IPR-related competition rules.²⁷ This view appears more plausible in as much as Article 40 applies to a narrower range of restrictive practices than those covered by Article 8.2, namely, anticompetitive practices pertaining to contractual licenses, a topic about which developing countries have long sought an international agreement. Given the nature of the practices listed, it is hard to imagine that Members remain totally free to ignore them in their domestic competition regimes.

This said, the nature and the scope of any such obligation would need to be defined more clearly before it could be taken seriously. On closer analysis, indeed, the view that Article 40.1 represents a minimum step toward international harmonization of IPR-related competition rules for global markets seems strained. Article 40 establishes only a duty to protect national IPR systems against practices that undermine their proper operation on domestic markets.

This interpretation seems more persuasive for two reasons. First, according to the legislative history,²⁸ the overall purpose of the TRIPS Agreement was to safeguard adequate levels of national IP protection. Hence, the restrictive, exception-like language embodied in Articles 40.1 and 40.2 reflect only a reservation, which Members made with regard to the possible uncontrolled exercise of the broad intellectual property regime that the TRIPs Agreement established. Politically speaking, the rules on competition policy merely constituted a sort of a "concession" to Members, which in effect recognized their residual sovereignty as regards this public policy area. As such, these rules cannot, by way of interpretation, be transformed into affirmative obligations.

²⁶ *Id.*, art. 40.2.

²⁷ See UNCTAD/ICTSD, Resource book, *supra* note 18, 3.2.1 (b) (i); *but see* A. HEINEMANN, *supra* note 4, at 584 (n. 107), 592.

²⁸ See *supra* note 12 and accompanying text.

Second, because the TRIPs Agreement was negotiated and conceptualized as a trade agreement, it is based on the principles of territoriality, of the protection of home markets, and of substantive trade reciprocity,²⁹ rather than on principles of protecting intellectual property or competition as such, let alone on principles of protecting the intellectual property or competition regimes of other Members or in their markets.³⁰ The promise Members made is not to respect foreign intellectual property rights, but to expose the trade regulations governing domestic markets to claims by foreign intellectual property owners that either the level of protection or of competition afforded them is inadequate.

There is, of course, a harmonizing effect but its rationale is not one of coordination as such.³¹ Rather, the TRIPs Agreement represents a system of exchange, whereby access to foreign markets is traded against a loss of political control over domestic markets, the yardstick of equivalence being the level of protection afforded by exclusive intellectual property rights. Since the price is a loss of sovereign control over the legal regulation of domestic markets, it may not be expanded beyond the bargain. And since the object of the bargain is the proper operation of the domestic intellectual property system, it is only to the extent that restrictive practices undermine such proper operation that Members may be held to a duty to actually control them.

Irrespective of the controversies about whether intellectual property protection and antitrust law stand in a conflicting or in a complementary relationship,³² clear cases of competition rules serving to enhance the operation of the intellectual property system are presented by some of the examples set out in Article 40.2, namely, no challenge

²⁹ For a more detailed analysis, see H. Ullrich, *Technology Protection According to TRIPs: Principles and Problems*, in FROM GATT TO TRIPs - THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS 357, 361 et seq., 377 et passim (F.-K. Beier & G. Schriker eds., 1996) [hereinafter FROM GATT TO TRIPs]; H. Ullrich, *TRIPs: Adequate Protection, Inadequate Trade, Adequate Competition Policy*, 4 PAC. RIM. L. POL'Y J. 153, 186 et seq. (1995). Predictably, intellectual property has become the subject of retaliatory action: in the infamous *Banana-case*, Nicaragua obtained some satisfaction by being authorized to disregard intellectual property rights, see E. VRANES, PRINCIPLES AND EMERGING PROBLEMS OF WTO CROSS RETALIATION EuZtschrWiR 10 (2001).

³⁰ But see Fox, *supra* note 22 at 493.

³¹ TRIPs Agreement, *supra* note 5, art. 40.3 is not an exception, since it is only intended to procedurally facilitate enforcement of domestic competition law on domestic markets, not to protect foreign markets from anticompetitive practices by virtue of domestic antitrust laws.

³² See *supra* note 4

clauses,³³ exclusive grant back conditions,³⁴ and coercive package licensing.³⁵ Still others may be conceived of,³⁶ but they ought to be equally well-defined and of an equally subversive nature to render the absence of at least some antitrust control over them tantamount to an "impairment"³⁷ of the bargained-for level of adequate intellectual property protection. Under the TRIPS provisions at least, such antitrust control need not necessarily result in a *per se* verdict, but it ought to be introduced and exercised as a matter of safeguarding adequate IPR protection.

³³ See *Lear v. Adkins*, 395 US 653 (1969) (invalidating such clauses on public policy grounds). For a critique, see R. Dreyfus, *Dethroning Lear: Licensee Estoppel and the Incentive to Innovate*, 27 VA. L. REV. 677 (1986); see also *Studiengesellschaft Kohle m.b.H. v. Shell Oil Co.*, 112 F.3d 1561 (Fed. Cir. 1997); Community law approaches the question as a problem of competition policy, but still is in search of consistency. See Commission Regulation 240/96 on the Application of Art. 85 (3) (now 81 (3)) of the Treaty to categories of technology transfer agreements, art. 4 (2) (b), 1996 O.J. (L 31) 2 [hereinafter Commission Reg. 240/96]; Commission Evaluation Report on the Transfer of Technology, *supra* note 22, No. 169 et seq. (referring to inconsistent case law of the CJEC). *But see* Art. 5 (1) (b) Commission Reg. 2659/2000 on the application of Art. 81 (3) of the Treaty to Categories of Research and Development Agreements, 2000 O.J. (L 304) 7 [hereinafter Commission Reg. 2659/2000].

³⁴ Exclusive grant-back requirements for improvements made by the licensee devalue the licensee's IPR, stifle the innovation incentive of the IPR-system, or at the very least bias it unduly in favor of the licensor, and run afoul of the legislative policy underlying the compulsory licensing rules. See Proposal for a Council Regulation on the Community Patent, art. 21 (2), 2000 O.J. (C 337) 278; French Code de la propriété intellectuelle Art. L 613-15; U.K. Patents Act, 1977 § 48 (3) (d) (ii); Art. 2(4), 6 1996 O.J. (L 31) 2; The Commission of the European Communities, *supra* note 22, No. 165 et seq.; U.S. Department of Justice & Federal Trade Commission, *Antitrust Guidelines for Licensing of Intellectual Property*, available at <http://www.usdoj.gov/atr/public/guidelines/ipguide.htm> (April 6, 1995) (providing pertinent U.S. antitrust law) [hereinafter *U.S. Antitrust Guidelines*].

³⁵ Coercive package licensing by virtue of the exercise of sufficient market power is a less clear case. However, as a matter of principle, it conflicts with the proper functioning of the IPR system to the extent that the licensee's free choice of licenses and of the licensor is the counterpart of the licensor's autonomy as regards the choice of licensees. See Case 19/84, *Pharmon v. Hoechst AG*, 1985 E.C.R. 2281 [1985], 3 C.M.L.R. 775 1985, 2281 (1985). Indeed, coercive licensing does not only foreclose alternative licensing opportunities of the licensee, but also undercuts its interest in innovation efforts of its own, and, therefore, the IPR-system's incentive to individually innovate. Moreover, market power is at odds with the IPR system as it undercuts its balanced operation by transforming legal exclusivity into an economic monopoly. See A. S. GUTTERMAN, *INNOVATION AND COMPETITION POLICY* 305 et seq. (1997) (providing a comparative view of antitrust treatment of package licensing).

³⁶ An example is "suppression of technology" by external acquisition and non-use. See J. Cohen & A. Burke, *An Overview of Antitrust Analysis of Suppression of Technology*, 66 ANTITRUST L.J. 421 (1998); Y. Wah Chin, *Unilateral Technology Suppression: Appropriate Antitrust and Patent Law Remedies*, 66 ANTITRUST L. J. 441 (1998); J. Flynn, *Antitrust Policy, Innovation Efficiencies, and the Suppression of Technology*, 66 ANTITRUST L. J. 487, 506 et seq. (1998).

³⁷ See TRIPS Agreement, *supra* note 5, art. 64 (applying article XXIII 1(b) of GATT to dispute-settlement actions for nullification or impairment of benefits). See also M. Furse, *Competition Law and the WTO Report: "Japan-Measures Affecting Consumer Photographic Film and Paper"*, 20 EUR. COMPETITION L. REV. 9 (1999) (analyzing the Kodak/Fuji camera film distribution case and providing a discussion of the problems of an impairment claim under GATT art. XXIII:1(b)).

2. *The Requirement that National Competition Policy be TRIPS- Consistent*

Conversely, Articles 8.2 and 40.2 limit the Members' sovereign power to prescribe national competition policy by requiring that measures adopted to control abusive or anticompetitive practices must be "consistent with the provisions of this Agreement."³⁸ This requirement of TRIPS consistency represents more than a mere limitation on remedial action, which is always subject to a principle of proportionality.³⁹ Rather, the consistency requirement concerns the substantive scope of IPR-related competition rules.

As such, it does not establish a standard of evaluation for restrictive practices that affect IPRs,⁴⁰ but only a safety zone for the core of intellectual property protection. In particular, there is no attempt here to reintroduce an "inherency" or a reasonable reward test for IPR-related anticompetitive conduct, which leading Members have abolished.⁴¹ Rather, this provision must be read as a caveat against an excessive exercise of competition policy, which the TRIPS Agreement, by its purpose and express wording, otherwise leaves Members free to define. It means that they may not use antitrust regulation as a pretext to undermine the protection of IPRs as guaranteed by the TRIPS Agreement.

This constraint has at least two implications. First, competition policy must remain true to its purpose and keep within the bounds of safeguarding competition; it may not outlaw uses and forms of intellectual property that the TRIPS Agreement seeks to safeguard. It follows from this negative limitation that national competition rules must respect the constitutive elements of intellectual property protection, such as contracts that ensure confidentiality and the protection of trade secrets,⁴² use restrictions

³⁸ See TRIPS Agreement, *supra* note 5, art. 8.2 (which presumably controls *id.* art 40.2 in this respect).

³⁹ See UNCTAD/ICTSD, Resource Book, *supra* note 18, ¶ 3.1.2 (b).

⁴⁰ In fact, the competition rules of the TRIPs Agreement have not been the object of detailed negotiations that would allow one to read them as establishing definite antitrust law standards. See Cottier, *supra* note 12, at 410.

⁴¹ See *e.g.*, *U.S. Antitrust Guidelines*, *supra* note 34, ¶12.1; the EU officially abandoned the inherency/reasonable reward doctrine when it withdrew the so-called Christmas Notice subsequent to the issuance of the first group exemption regulation on patent license agreements in 1984. See Notice on Patent License Agreements (84/C220/35), OJEC 1984 C 220, 14.

⁴² See Commission Reg. 240/96, arts. 2 (1) (3), *supra* n.33; for details see H. Ullrich, in EG-WETTBEWERBSRECHT 1241 et seq. (No. 33) (U. Immenga, E.-J. Mestmäcker, eds., 1997).

necessary to defining the scope of a service rendered by the lease of software,⁴³ or licensing restrictions needed to control the dissemination of protected subject matter.⁴⁴ More generally, the power of licensors to impose limiting conditions may be regulated only with regard to potential anticompetitive effects, and modes of exploitation that the TRIPS Agreement expressly allows may not be prohibited as such.⁴⁵

Second, the requirement of consistency serves to safeguard only TRIPS standards of intellectual property protection. The consistency requirement thus prevents competition law from encroaching on national intellectual property protection, but it says nothing about the extraterritorial impact of national competition policy on the exercise of intellectual property rights abroad. The TRIPS Agreement only obliges Members to afford adequate protection in their domestic territories. It is not an Agreement about the mutual respect of foreign property titles, but about protecting foreign technology in national markets when domestic law recognizes the entitlements. Therefore, spillovers of national competition policy enforcement on foreign markets and on intellectual property held there are matters to be dealt with on the basis of public international law or of antitrust cooperation and assistance agreements, but they are not a matter for TRIPS.⁴⁶

Moreover, while the consistency requirement seeks to safeguard the TRIPS standards of protection, it does not apply to conflicts between domestic competition policy and modes of domestic intellectual property protection that fall outside the TRIPS Agreement. This constraint on the consistency requirement may prove particularly important with respect to modern forms of protecting innovation, such as the EU's *sui generis* regime to protect investment in databases⁴⁷ (i.e., for

⁴³ See H. Ullrich in H. ULLRICH & E. KÖRNER, *DER INTERNATIONALE SOFTWAREVERTRAG* 272 et seq., 277 et seq (1995).

⁴⁴ CJEC of April 19, 1988, case 27/87, *Erauw-Jacquéry/La Hesbignonne*, Rep. 1988, 1919 (recital 10).

⁴⁵ Thus, national competition laws may not make non-manufacturing on the domestic territory a *per se* violation, see TRIPS Agreement, *supra* note 5, Art. 27; but, conversely, a licensor may require the licensee to exploit the license by domestic manufacturing. Likewise, competition laws may not impose stricter use requirements for trademarks than provided for by Art. 19, TRIPS Agreement, *supra* note 5, yet a licensor may impose a stricter obligation of use on the licensee.

⁴⁶ *But see* E. Fox, *supra* note 22; A. Odman, *Using TRIPs to Make the Innovation Process Work*, J. WORLD INTEL. PROP. 343, 364 et seq (2000).

⁴⁷ See E.U. Database Directive, *supra* note 10, art. 16(3), (providing for a monitoring rule obliging the Commission to examine "in particular the application of the *sui generis* right including articles 8

subcopyrightable subject-matter). It may also exonerate the treatment of subpatentable subject-matter,⁴⁸ or signs and indications which do not qualify as marks (such as domain names) or as geographical indications. Thus, with regard to such non-TRIPS intellectual property rights, Members may introduce more stringent rules on restrictive licensing or on technology transfer, just as they may control the exercise of these rights systematically and regardless of the existence of market power.

3. *The Dissemination Concern*

Reliance on exclusive intellectual property rights to stimulate investment in new technology poses a twofold economic dilemma. First, the exclusive rights, which provide incentives to innovate in order to reap market-induced rewards, may also block the development of improved, related or complementary technology. This is known as the vertical innovation dilemma. Second, exclusivity may impede optimal exploitation of protected technology, since by definition, optimal exploitation will occur only under conditions of full intra-brand competition, at least if interbrand competition is not perfect. This is known as the horizontal diffusion dilemma. To some extent, both domestic laws and the TRIPS Agreement address the vertical innovation dilemma in a general fashion by imposing a disclosure requirement on patented technology,⁴⁹ although there is no similar requirement for copyrightable technology, notably computer programs.⁵⁰ The problem is further mitigated by

and 9, and especially whether the application of this right has led to abuse of a dominant position or to other interference with free competition which would justify appropriate measures being taken, in particular the establishment of non-voluntary licensing arrangements"). This could lead to a compulsory licensing rule in the interest of competition, and it would virtually transform protection from a property to a liability regime. *See, e.g.,* J. H. Reichman, *Database Protection in a Global Economy*, 2002 REVUE INTERNATIONALE DE DROIT ECONOMIQUE 455, 479-80.

⁴⁸ Such as utility model protection, which exists under many national laws, and which is under consideration by the European Community. *See* R. Kraßer, *Harmonization of Utility Model Law in Europe*, 31 IIC 797 (2000); Commission Staff Working Paper: Consultations on the impact of the Community utility model in order to update the Green Paper on the Protection of Utility Models in the Single Market (COM(95)370 final), Document (SEC 1307) (2001) 1307, *available at* europa.eu.int/comm/internal_market/en/indprop/model/consultation_en.pdf (July 26, 2001).

⁴⁹ *See* TRIPS Agreement, *supra* note 5, Art. 29.

⁵⁰ *See generally*, Pamela Samuelson, Randall Davis, Mitchell D. Kapor, and J. H. Reichman, *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2307, 2343-65 (1994).

allowing members to enact a limited range of exceptions to both patent and copyright protection in their domestic laws.⁵¹

In practice, both the vertical and horizontal dilemmas are primarily overcome by obliging follow-on innovators to take out licenses for their activities.⁵² There are, of course, other ways of overcoming these dilemmas, such as through cooperation or concentration, but the TRIPS Agreement does not cover these other approaches, which have become so widespread and economically important.⁵³ It is only concerned with IPR-based restrictive practices, particularly "anticompetitive practices in contractual licenses."⁵⁴ Even then, it focuses mainly on "the transfer and dissemination of technology,"⁵⁵ i.e., on the propagation or diffusion of technology, rather than on reinforcing the innovation process by R&D-oriented or invention-enhancing licensing. Indeed, both the negotiating history of the TRIPS Agreement and its structure point to an underlying tension between the goal of promoting and protecting innovation by elevating universal intellectual property standards to the level that the industrialized nations deemed appropriate⁵⁶ and the goal of safeguarding the dissemination of technology on terms favorable to developing countries by some rather vaguely defined and reluctantly conceded bottom-line competition rules.⁵⁷

⁵¹ See TRIPS Agreement, *supra* note 5, art. 13 (exceptions to copyright protection); *id.* art. 30 (exceptions to patent protection).

⁵² The term follow-on innovator is meant positively in the sense that technological progress is a multi-phased, helical, interactive process, which may involve both lead innovations and complex component innovation, and in both cases, the follow-on innovator makes its own, cumulative contribution either by improvement or by supplying a component. See, *B.A. Kemp, The Follow-on Development Process v. the Conventional Patent Protection Concept.*, 16 IDEA 31 (1974) ; Richard Nelson, *Intellectual Property Protection for Cumulative Systems Technology*, 94 COLUM.L. REV. 2674 (1994).

⁵³ See *infra* text accompanying notes 67-85.

⁵⁴ See TRIPS Agreement, *supra* note 5, Part. II, Sect. 8

⁵⁵ See *id.*, art. 7.

⁵⁶ See J. H. Reichman, *Universal Minimum Standards of Intellectual Property Protection under the TRIPS Component of the WTO Agreement*, in INTELLECTUAL PROPERTY AND INTERNATIONAL TRADE, *supra* note 12, at 21-144.

⁵⁷ For the general politico-economic background see G. E. Evans, *Intellectual Property as a Trade Issue - The Making of the Agreement on Trade-Related Aspects of Intellectual Property Rights*, 18 WORLD COMPETITION L. REV. at 137 (1994); M. O'Reagan, *The Protection of Intellectual Property, International Trade and the European Community: The Impact of the TRIPS-Agreement of the Uruguay Round of Multilateral Trade Negotiations*, 1 LEGAL ISSUES EUR. INTEGRATION 1 (1995); H. Ullrich, *GATT: Industrial Property Protection, Fair Trade and Development*, in GATT OR WIPO, NEW WAYS IN THE PROTECTION OF INTELLECTUAL PROPERTY 127, 131 et seq. (F.-K. Beier & G. Schrickler eds., 1989).

Nevertheless, the weight of these concessions should not be underestimated, given that they were made in recognition of the Members' sovereign authority over competition policy. They were also apparently premised on the same donor - recipient relationship that characterized the preceding discussions and disputes concerning the proposed Code of Conduct for Technology Transfer,⁵⁸ which complicates the issues. The appendix-like character of article 40, as well as its defensive wording and embryonic rules, make it sufficiently clear that it was not devised as an invitation to counterbalance increased IP protection by a pro-active licensing and technology transfer strategy, but rather as a cautious form of containment. It does not directly seek to ensure realization of the technology transfer objective set out in Article 7, it merely promotes the attainment of that goal by resort to the rules of competition law governing domestic markets.

These rules constitute a sphere of national policymaking comparable to decisions to grant compulsory licenses⁵⁹ or to admit parallel imports,⁶⁰ two other areas of major concern for developing countries. While acknowledging that it cannot prevent members from invoking such rules, the TRIPS Agreement nonetheless keeps them within certain limits.

II. INTERNATIONAL COMPETITION RULES AFTER THE TRIPS AGREEMENT

A. The New Reality

The tension between innovation and dissemination in the TRIPS Agreement becomes pronounced with regard to the competition rules governing the unilateral exercise of exclusive intellectual property rights. It has been aggravated by a shift from an economy built around a multiplicity of independent innovators to an economy built on collaborative research and pooled incentives to innovate.

⁵⁸ The examples given in Art. 40.2 point to this relationship of unequal bargaining power, which overshadowed the topic of international technology transfer. See W. FIKENTSCHER, *THE DRAFT INTERNATIONAL CODE OF CONDUCT ON THE TRANSFER OF TECHNOLOGY* 5 et seq., 22 et seq. (1980); P. Jefferies, *Regulation of Transfer of Technology—An Evaluation of the UNCTAD Code of Conduct*, 18 HARV. INT'L L. J. 199 (1977).

⁵⁹ See TRIPS Agreement, *supra* note 5, art. 31.

⁶⁰ *Id.*, art. 6.

1. Innovation and the Unilateral Exercise of Exclusive Rights in the Information Economy

It is only in Article 8.2 of the TRIPS Agreement that the risks of abusive conduct are at least mentioned.⁶¹ There is, however, no indication as to the criteria that members should employ in determining either the existence of abuses or the limits on efforts to control them.

a. Defining Abuses

Clearly, Members cannot invoke the need to regulate abuses every time that rights holders fail to comply with "adequate standards and principles concerning the... use of trade-related intellectual property rights."⁶² Such a strict standard would render any unlawful exercise of IPRs abusive, and it would thus deprive Art. 8.2 of any functional importance in its own right. Conversely, "abuses" may cover "misuses,"⁶³ and they need not be limited to cases of absolute or relative market power alone.⁶⁴

As previously suggested, the open-ended wording of Art 8.2 in this and other contexts suggests that it was intended as a rule of containment for national competition policy rather than as a norm informing the proper development of such policy. At bottom, the TRIPS Agreement is an international convention dealing with intellectual property rights and not competition law. Even so, this reticence amply confirms the "backwards looking" character of those competition rules that are set out in the TRIPS Agreement, as noted earlier.

The TRIPS negotiations got underway in the mid-1980s as an anti-piracy and anti-counterfeiting undertaking. It was transformed into trade negotiations concerning intellectual property in general under pressure from major industrial stakeholders,

⁶¹ *Id.*, art. 8.2

⁶² TRIPS Agreement, *supra* note 5, Preamble, Recital 2 (b), (recognizing "the need for new rules and disciplines concerning... the provision of adequate standards and principles concerning the availability, scope and use of trade-related intellectual property rights").

⁶³ For the misuse doctrine in US law, *see* L. SULLIVAN & W. GRIMES, *THE LAW OF ANTITRUST - AN INTEGRATED HANDBOOK* 882 et seq. (2000). *See also* H. HOVENKAMP, M. D. JANIS & M. A. LEMLEY, *IP AND ANTITRUST*, ch 3 (2002).

especially those engaged in the development and exploitation of new technologies, who faced heightened competition, particularly from firms in Newly Industrialized Countries.⁶⁵ Considerations of competition law were not, however, similarly elevated to the level of this new reality. On the contrary, international efforts to achieve a "Code of Conduct on Transfer of Technology" definitively broke down at this same period even though newly identified issues of technology-related competition law already merited attention.⁶⁶

b. Technology as a Product

The new reality posed some hard questions about the proper limits on the unilateral exercise of exclusive intellectual property rights. For starters, IPRs were extended to new subject-matter categories (for example, copyrights in computer programs and sui generis protection of databases); the protection of some new categories was tightened (for example, patents were granted ever more readily for computer programs in addition to copyright protection);⁶⁷ and pre-existing exceptions or limitations on the scope of protection were also weakened so as to render the protection of new subject matters ever more opaque and inaccessible.⁶⁸ Even more telling, rights holders tended

⁶⁴ See UNCTAD & ICTSD, *supra* note 18, ¶3.1.1 (b).

⁶⁵ See G. Evans, *supra* note 57, 149 et seq., 158 et seq.; see also "Basic Framework of GATT Provisions on Intellectual Property", Statement of Views of the European, Japanese and United States Business Communities, June 1988, *reprinted in* FROM GATT TO TRIPS, *supra* note 29, at 355 et seq. (which was very influential).

⁶⁶ See UNCTAD Secretariat, *Status of Negotiations, in* INTERNATIONAL TECHNOLOGY TRANSFER *supra* note 12, 140, 142.

⁶⁷ It is at least questionable whether European efforts to keep the patentability of computer programs within the limits of technology-dependent inventions is theoretically meaningful and practically promising in view of the broader availability of patents in the US. See E. C. COMMISSION, Proposal for a Directive of the Parliament and the Council on the patentability of computer-implemented inventions, COM (2002) 92 final; European Parliament, Committee on Legal Affairs and the Internal Market, Draft Report on the Proposal of February 13, 2003 (2002/0047 (COD)); COUNCIL, Common Approach: Proposal for a Directive on the Patentability of Computer Implemented Inventions, November 8, 2002 Doc. 14017/02; see also, A. Howard, *Patentability of Computer-Implemented Inventions*, 2002 CRi, 97; R. Bakels & P. Hugenholtz, *The patentability of computer programs - Discussion of European-level legislation in the field of patents for software*, Working Paper, European Parliament, Directorate-General for Research, Legal Affairs Series, Luxembourg 2002.

⁶⁸ See the combined effect of the broad concept of reproduction and the limitations on reverse engineering in Art. 4 (1) (a) and Art. 6 of EU Directive 91/260 on the legal protection of computer

to use their IPRs to maintain ever closer control over the modes of exploiting these new subject matters of protection in their disembodied states, and not just in tangible material embodiments as in the past.

The disembodied technological subject matter itself—rather than some particular embodiments of it—thus increasingly became the product that was directly sold on the market. This is true, for example, in biotechnology to the extent that inventions are not transformed into goods, but are exploited as research tools or directly applied as a technology. It is particularly true of computer software and databases when licensed (as they normally are) as services rather than distributed as physical products. In all these cases, use of the protected matter is subject to strict contractual limitations and direct quantitative control; and there is no possibility of freeing trade from these constraints and promoting intra-brand competition by resorting to the doctrine of exhaustion.⁶⁹ On the contrary, any potential network effects—though dependent in scope on the functional properties of the subject matter at issue—may become fully internalized, to the benefit of proprietors.

The implications for competition and, consequently, for properly defining what constitutes undue restraints on trade of this shift from protecting a manufacturing process or the design of a machine⁷⁰ to the direct exploitation of disembodied technology as a product, and the corresponding transition away from distribution in

programs, OJEC 1991 L 132, 42, together with the imposition of technical protection measures by Art. 6 EU Directive 2001/29 of May 22, 2001 on the harmonisation of certain aspects of copyright and related rights in the information society. OJEC 2001 L 167, 10. Even then the level of protection seems neither sufficient nor balanced. *See* I. Lloyd, *Intellectual Property in the Information Age*, 2001 EUR. INT. REP. REV. (E.I.P.R.), 291; K. Retzer, *On the Technical Protection of Copyright*, 2002 CRi 134.

⁶⁹ Any gray market analogy fails, because, by definition, the "exhausted" embodiments are traded lawfully, whereas in cyberspace, "gray market" transactions still need to be qualified as lawful or unlawful. *See* S. Ghosh, *Gray Markets in Cyberspace*, 7 J. INT. PROP. L. 1 (1999); D. Rice, *Digital Information as Property and Product: U. C.C. Article 2B*, 22 U. DAYTON L. REV. 622, 630 et seq. (1997).

⁷⁰ Product patents normally protect a new technical configuration of an apparatus, a machine, a tool, a component, or the like. The point is that, at least as far as patents are concerned, the distinction between process and product invention becomes blurred when the protected subject matter (the technical teaching) becomes the product that is sold as such. In this state, the patentee's exclusivity becomes "perfect", because there is no competition any more on the downstream level of tangible products made according to different processes or designed differently, but meeting the same function (without being technical equivalents in the patent law sense), but only and directly on the level of the technical instructions as such, provided that alternative problem solving methods are available at all. The risk, therefore, is that the scope of protection might become ever larger, since the issue will no longer be, whether a given product configuration is equivalent to the teaching of the invention at stake, but whether the different teachings are functionally equivalent.

the form of tangible embodiments, have yet to be worked out. There are at least two important economic consequences that merit to be mentioned here.

First, in the absence of tangible embodiments subject to the rules of appropriation and consumption that traditionally reflected the market value of any given technology, proprietors will seek to fully capture the value of the informational products by controlling the specific amounts and purposes of use, either directly by virtue of their exclusive rights or indirectly by virtue of contract stipulations.⁷¹ Second, when the protected subject matter is commercially exploited in this disembodied state, the rights holders may effectively capture all the returns from all uses on different market segments without spillovers or other uncontrolled social benefits. In other words, the rights holder may privatize all the multi-functional or multi-purpose qualities of knowledge that were previously available to the public when distributed in tangible embodiments.

It is this latter effect that has particularly attracted the attention of competition law. Quantitative or qualitative restrictions on use were usually recognized as an economically necessary means of defining the contractual quid pro quo.⁷² Functional restrictions on use, by contrast, have raised problems precisely when they resulted from the unilateral exercise of exclusive rights, namely, from refusals to license or to deal. Such refusals were tolerated in conjunction with the conventional uses of protected subject matter as a manufacturing design for tangible products, such as spare parts.⁷³ However, when the transaction pertains to information as such, courts begin to worry and have declined to validate a refusal to license when it blocked

⁷¹ Which raises the issue as to whether and to what extent contract law may limit the use of information in connection with the exercise of exclusive intellectual property rights. See P. Samuelson, *Licensing Information in the Global Information Market: Freedom of Contract Meets Public Policy*, 1999 EUR. INTELL. PROP. REV., 386; T. Dreier & M. Senftleben, *Das Verhältnis des Urheberrechts zum Vertragsrecht - Grenzen des Vertragsrechts durch Intellectual Property Law*, in DER E-COMMERCE VERTRAG NACH AMERIKANISCHEM RECHT 81 (M. Lejeune ed., 2001). See also N. Elkin-Koren, *A Public-Regarding Approach to Contracting over Copyrights*, in EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY, *supra* note 4, at 191. J. H. Reichman & Jonathan Franklin, *Privately Legislated Intellectual Property Rights: Reconciling Freedom of Contract with Public Good Uses of Information*, 147 U. PA. L. REV. 875 (1999).

⁷² See *supra* note 43 [ed: Please indicate correct note]

⁷³ See CJEC of October 5, 1988, Case 238/87, Volvo/Veng, Ltd., 1988 E.C.R. 6211. The outcome, however, remains controversial and legislation has failed to solve the problem. See Art. 14, 18 EU-Directive 98/71 of October 13, 1998 on the legal protection of designs, 1998 O.J. (L 289) 28; Commission Regulation 6/2002 of 12 December 2001 on Community Designs, (2002 O.J. (L 3), 1, 35., art. 19(1).

additional uses of the protected subject matter. In such cases, the concern underlying the illegality ruling seems usually (though not always) to be the restraint on add-on or value-added innovation in adjacent markets,⁷⁴ with market power serving only as a connecting factor for the application of rules rooted in competition law.⁷⁵ By contrast, market power will itself become an element of an illegal restraint when it is used to block alternative innovation on the same market segment.⁷⁶

2. *Toward Group Innovation Incentives: Pooling, Cross-Licensing, Joint Research and Development*

While the antitrust implications of this trend away from hardware-based exploitation of IPRs remain to be clarified,⁷⁷ the increasing ubiquity and technological or economic interdependencies of IPRs have led to a revival of interest in pooling and the cross licensing of such rights. In economic terms, this interest is not necessarily indicative of competitive creativity so much as of follower conduct in the technological mainstream and of decreased technological opportunities.⁷⁸ However,

⁷⁴ The paradigmatic case is *Magill TV Guide*, *supra* note 7, it stands for similar issues of interface access and innovation pre-disclosure claimed by manufacturers of peripheral products. *See further* H. Ullrich, *supra* note 4, at 381 et seq.; D. Valentine, *Abuse of Dominance in Relation to Intellectual Property: U.S. Perspectives and the Intel Cases*, 2000 COMPUTER L. REV. INT'L 73 (2000) (discussing *inter alia* *Intergraph Corp. v. Intel Corp.*, 195 F.3d 1346 (Fed. Cir. 1999)). Important claims for access to source code have also been raised to enable the supply of maintenance services. *See* OLG München of September 17, 1998, WuW E DE-R 251.

⁷⁵ At least in the absence of a misuse doctrine, such as may be applied in the U.S. *See* *DSC Communications Corp. v. DGI Technologies, Inc.*, 81 F.3d 597 (5th Cir. 1996); A. Fellmeth, *Copyright Misuse and the Limits of the Intellectual Property Monopoly*, 6 J. INTELL. PROP. L. 1, 26 (1998); R. Hoerner, *The Decline (and Fall?) of the Patent Misuse Doctrine in the Federal Circuit*, 69 ANTITRUST L. J. 669 (2001). Note that in *Magill TV Guide*, *supra* note 7, exercise of the copyright simply protected existing market power, but did not serve to extend market power.

⁷⁶ *See* *U.S. v. Microsoft*, 253 F.3d 34 (D.C. Cir. 2001). Literature on the Microsoft case is abundant. *See* H. Hovenkamp, *IP ties and Microsoft's Rule Of Reason*, 47 ANTITRUST BULL. 369 (2002) (providing a discussion of the core issue); R. Picker, *Pursuing a Remedy in Microsoft: The Declining Need for Centralized Coordination in a Networked World*, 158 J. OF INST. & THEORETICAL ECON. 113 (2000) (providing a broader account and analysis). In some cases, the copyright misuse doctrine may offer approaches independent of market power. *See* *Lasercomb America, Inc. v. Reynolds*, 911 F.2d 970 (4th Cir. 1990); *Practice Management Information Corp. v. American Medica Association*, 121 F.3d 516 (9th Cir. 1997). However, both cases concerned licensing restrictions rather than refusals to license.

⁷⁷ For additional illustrations of the problems, *see* M. O'Rourke, *Property Rights and Competition on the Internet: In Search of an Appropriate Analogy*, 16 BERKELEY TECH. L.J. 561 (2001).

⁷⁸ Just as patent protection is more needed as a technology matures than at its origins, so pooling and exchanging of rights may become important as technological alternatives become scarce or are

competition lawyers nowadays tend to downplay the risks of concerted behavior and to stress the reduction of transaction costs on the road to collective technological progress.⁷⁹

Risks of market foreclosure due to access limitations, and of enhanced market power are, of course, recognized,⁸⁰ but they need not be dealt with here in detail. The point rather is that the supposed defects of the intellectual property system, or, more precisely, of its individualistic orientation and its emphasis on single proprietors is overcome by institutional arrangements, which may or may not be market-driven, and these are used to support innovation. Whether this approach also implies group innovation or not will depend on whether a given pool is built around convergent, component, or complementary technologies. At the very least it certainly means that the incentives are shifted away from exclusivity to group access, if not membership.

Moreover, the balance between stimulating innovation and promoting the dissemination of technology may tilt toward the former once pools and cross-licensing are tolerated as innovation-enabling arrangements, not as systems of technology propagation. They build upon the IP system, but, at least in part, they modify its primary incentive rationale, and to this extent they reach beyond the confines of the TRIPS Agreement.

Similar considerations apply to cooperative research and development agreements. As an increasingly common way of promoting and facilitating technological innovation,⁸¹ this generalized form of interfirm cooperation falls outside the ambit of

made scarce by standardization. See C. Shapiro, *Setting Compatibility Standards: Cooperation or Collusion*, in EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY, *supra* note 4, 81, 93 et seq.

⁷⁹ See U.S. Patent and Trademark Office, *Patent Pools: A Solution to the Problems of Access in Biotechnology Patents? available at <http://www.uspto.gov/web/offices/pac/dapp/opla/patpoolcover.html>* (December 5, 2000); R. Merges, *Institutions for Intellectual Property Transactions: The Case of Patent Pools*, in EXPANDING THE BOUNDARIES OF INTELLECTUAL PROPERTY) *supra* note 4, 123, 156 et seq.; T. Beard, D. Kaserman, *Patent thickets, cross-licensing, and antitrust*, 47 ANTITRUST BULL. 345 (2002); CHR. FOLZ, *TECHNOLOGIEGEMEINSCHAFTEN UND GRUPPENFREISTELLUNGEN* 239 et seq (2002); for a critical view, see J. Barton, *Antitrust Treatment of Oligopolies with Mutually Blocking Patent Portfolios*, 69 ANTITRUST L.J. 851 (2001).

⁸⁰ See Folz, *supra* note 79, at 259 et seq.; Sullivan & Grimes, *supra* note 63, at 873 et seq.

⁸¹ See OECD, *NEW PATTERNS OF INDUSTRIAL GLOBALISATION - CROSSBORDER MERGERS AND ACQUISITIONS AND STRATEGIC ALLIANCES* 25 et seq., 49 et seq. (2001); R. Narula & J. Hagedoorn, *Innovating Through Strategic Alliances: Moving Towards International Partnerships and Contractual Agreements*, 19 TECHNOVATION 283 (1999); J. Hagedoorn, A. Link, N. Vonortas, *Research partnerships and in which industries do projects take place?* 30 RES. POL'Y 993 (2001).

the competition rules in the TRIPS Agreement.⁸² However, it remains relevant here for two reasons. First, when countries ease antitrust control of joint R&D arrangements, they may provide an innovation incentive in its own right.⁸³

Second, while cooperative R&D is driven by techno-economic necessity rather than by a desire to escape techno-legal dependencies (a motive for pools), it is directly related to intellectual property protection, both as regards the use and acquisition of rights. The intellectual contributions to, and results of, cooperation can only be defined, delimited and attributed by virtue of exclusive rights, which protect them, and this creates an additional incentive to acquire and enlarge protection individually by sophisticated patent strategies deployed prior to and during the various phases of cooperation. At the same time, the joint R&D effort itself constitutes a productive source of intellectual property, which is to be held in common or cross licensed among partners, and possibly even to third parties.

Competition laws favor cooperation by means of safe-harbor provisions, low-key enforcement or outright exemptions.⁸⁴ They also generously permit intellectual property arrangements that enable partners to safeguard their relative competitive positions during and after the cooperative ventures, which may be enhanced by the jointly produced R&D results. Here again, and much more overtly, a layer of group competition policy is superimposed on the individualistic, exclusivity-based orientation of the intellectual property system. Yet, as competition rules evolve more into "coopetition" rules, the shift to problems of access and exposure to collective rivalry seems likely to result in tighter antitrust control only at the threshold to market dominance.⁸⁵

For a theoretical explanation, see T. Hämäläinen & G. Schienstock, *The Comparative Advantage of Networks in Economic Organisation: Efficiency and Innovation in Highly Specialised and Uncertain Environments*, in INNOVATION NETWORKS 17 et seq. (OECD ed., 2001).

⁸² See UNCTAD & ICTSD RESOURCE BOOK, *supra* note 18, ¶ 3.1.1 (e).

⁸³ See Art.157(1),163(2) EU Treaty, and recital 2 Commission Regulation 2659/2000, *supra* n.33 ; A. Link et al., *An Analysis of Policy Initiatives to Promote Strategic Research Partnerships*, 31 RES. POL'Y 1459 (2002); ; H. ULLRICH, KOOPERATIVE FORSCHUNG UND KARTELLRECHT, 83 et seq., 95 et seq., 165 et seq. (1988).

⁸⁴ See National Cooperative Research and Production Act, 15 U.S.C. §§ 4301-4305 [U.S.A.]; for the EU, Commission Regulation 2659/2000, *supra* n.33; EC Commission, Guidelines on the applicability of Art. 81 of the EC Treaty to horizontal cooperation agreements, OJEC 2001, C3, 2 sub No. 39 et seq.

⁸⁵ For a US-EU comparison, see A. FUCHS, KARTELLRECHTLICHE GRENZEN DER FORSCHUNGSKOOPERATION 447 et seq., 461 et seq., 472 et seq. (1989); H. Ullrich, *Competitor*

B. The Global Response: An Internationally Uniform and Innovation-Oriented Competition Law?

The first observation that follows from this summary of current trends is that the principles of competition embodied in the TRIPS Agreement are obsolete. While concerns about technology transfer persist, the Agreement's emphasis on post-innovation transfers by means of bilateral licensing transactions, i.e., the diffusion of technologies into additional markets, corresponds to a marginal component of real world issues.

1. From competition policy to innovation policy

Insofar as present-day competition law affects licensing at all it mainly deals with either problems stemming from the distribution of protected, relatively disembodied subject matter as a product or with the acquisition of technology at the top-end of the innovation chain. The real issue is early access to information, and it is raised mainly in the context of cooperation, concentration, and the control of market power.⁸⁶

This state of affairs reflects a shift from independent technological competition by individuals to industrially coordinated innovation, and to competition for full market control,⁸⁷ which accompanies a change in the function of intellectual property law. Whatever its past role as a provider of individual incentives to innovate may have

Cooperation, in THE FUTURE OF TRANSNATIONAL ANTITRUST LAW (J. Drexler ed. 2003) 159 et seq..

⁸⁶ See *supra* text accompanying notes 48 et seq. For IPR issues relating to innovation merger control, see R. Pitofsky, *Antitrust and Intellectual Property: Unresolved Issues at the Heart of the New Economy*, 16 BERKELEY TECH. L.J. 535, 552 et seq. (2001); Sullivan, *Is Competition Policy Possible in High Tech Markets?: An Inquiry into Antitrust, Intellectual Property, and Broadband Regulation As Applied to the "New Economy"*, 52 CASE W. RES. L. REV. 54 et seq. (2001); H. Ullrich, *Problems of Intellectual Property Rights and Competition Policy – The Approach of the WTO Working Group on Trade and Competition*, 1 in TOWARDS WTO COMPETITION RULES 277 et seq. (R. Zäch, ed., 1999); J. KAIRO & M. PAULWEBER, *HIGH TECHNOLOGY INDUSTRIES, PRIVATE RESTRAINTS ON INNOVATION, AND EU ANTITRUST LAW: THE EUROPEAN APPROACH TO MARKET ANALYSES OF R AND D COMPETITION, PART II* 68, 73 et seq. (2001). On the one hand, IPR-licensing restraints may be considered ancillary to acquisition or to the establishment of joint ventures, see Notice on restrictions directly related and necessary to concentrations (ancillary restraints), O.J., 2001 L 188, 5); on the other hand, IPR-licensing to third parties may be required as a condition for the authorization of a merger, see N. Ersboll, *Commitments Under the Merger Regulation*, 2001 EUR. COMPETITION L. REV. 357, 363.

⁸⁷ See D. Encoua & A. Hollander, *Competition Policy and Innovation*, 18 OXFORD REV. ECON. POL'Y 63, 65 et seq. (2002); Charles River Associates, *Innovation and Competition Policy*, Report for the Office of Fair Trading, March 2002, Part I, 16 et seq., 24 et seq., 118 et seq., 122 et seq.; MONOPOLKOMMISSION, HAUPTGUTACHTEN 2000/2001 - NETZWETTBEWERB DURCH REGULIERUNG, 340 (No. 665) (2003).

been, IP law's current role is mainly to provide ancillary support for incentives to innovate that are not just set by market forces,⁸⁸ but that are determined by coordinated group efforts and by the political acceptance of private control over the infrastructure governing certain information technologies.⁸⁹

This longstanding shift of competition law enforcement from safeguarding free and individual competition to merely controlling the relative efficiency of competitor transactions corroborates the innovation policy rationale, which underlies both the tolerance of coordinated group efforts by IPR-related antitrust law today, and its reluctance to regulate anything short of the excessive exercise of actual market power. Moreover, this efficiency based innovation policy rationale increasingly governs the application of competition rules to the traditional area of bilateral licensing transactions, including so-called "anticompetitive" technology transfers.⁹⁰

2. *The European Union's Example*

The recent reform proposals regarding block exemptions for technology transfer agreements under Art. 81 (3) of the EC Treaty may serve to briefly illustrate both the overall trend toward allowing, if not fostering, group-supported innovation, and the

⁸⁸ The incentives are set by market opportunities, the profit potential of which may be more fully controlled in the information economy by intellectual property than in the hardware economy, but they are determined by the economic nature of the subject-matter sold on the market (e.g., its general qualities such as simplicity and reliability, or its information specific qualities, such as network effects, compatibility etc.), that is, by the demand it may attract, and not so much by the legal terms of protection, *see* Ullrich, *supra* note 4, at 367 et seq., 381 et seq. (citing authorities). In this context efforts to define, for competition law purposes, the limits of intellectual property in accordance with the economic nature and effects of the subject matter, as is frequently advocated (see D. Encoua & A. Hollander, *supra* note 87, at 76 et seq. with references), would be a highly interventionist exercise. *See* P. Carstensen, *Remedying the Microsoft Monopoly: Monopoly Law, the Rights of Buyers, and the Enclosure Movement in Intellectual Property*, XLIV Antitrust Bull. 577, 610 et seq. (1999).

⁸⁹ Such as basic science and its results (discoveries) or technologies showing large direct network effects (*see* with respect to the *Microsoft* case, P. Carstensen, *supra* note 88, at 592 et seq.). It is with regard to such infrastructure technologies that specific regulations may be envisaged, just as this is accepted with respect to traditional infrastructure facilities subsequent to their privatization. Regulation is not only a remedy to control former public monopolies, but a way to ensure the sufficient supply of at least basic infrastructure services, and, to this effect, it may even be extended to private enterprises beyond competition law control over essential facilities, albeit at the risk of stifling innovation. *See* for an illustrative example the German discussion on whether telecommunications may be sufficiently controlled by competition law, in particular its rules on abuse of market power, including refusals of access to essential facilities, or whether and how long they should be subject to direct regulation. MONOPOLKOMMISSION, *supra* note 87, at 49 et seq.

⁹⁰ For the link that the TRIPS Agreement establishes between the control of technology transfer and restrictive conduct, *see supra* text accompanying notes 21 et seq.

pro-innovation approach now taken in assessing licensing transactions.⁹¹ This quite radical change of approach was outlined in an "Evaluation Report on the Transfer of Technology Block Exemption",⁹² which represents a complementary step in the Commission's overall reformulation of EU competition policy. This report, which interested parties have generally welcomed,⁹³ suggests abandoning the Community's typical focus on territorial exercises of exclusive IPRs. Instead, it proposes to follow a strict systematic division between vertical and horizontal licensing, with a narrow and flexible definition of potential competition between licensor and licensee.⁹⁴

The recent drafts of a new block exemption for technology transfer agreements and of new Guidelines for applying Article 81 to such agreements⁹⁵ adopt this same distinction and most, though not all, of the detailed suggestions set out in the Evaluation Report. Vertical licenses will be treated under a regime that closely tracks the treatment of vertical restraints in general. With the exception of hardcore restrictions, such as minimum resale price fixing and excessive territorial protection, the block exemption applies to all the well-known forms of restrictive licensing terms up to a market-share threshold of 30% ("safe harbor" concept).⁹⁶

Likewise, horizontal agreements are dealt with by measures analogous to the general treatment of agreements between competitors.⁹⁷ Such agreements are "safe" from antitrust challenge up to a combined market share of 20 % (the Report proposed

⁹¹ A history of measures that have gradually liberalized EU competition policy in this regard from 1984 on lies beyond the scope of this article. *See generally*, Hanns Ullrich, [in Immenga, Mestmäcker ed.], *supra* note 42, at 1268; Hanns Ullrich, *IP-Antitrust in Context—Approaches to International Rules on Restrictive Uses of Intellectual Property Rights*, ___ ANTITRUST BULL. ___ (forthcoming 2003).

⁹² *See supra* note 22.

⁹³ All reactions are available at http://europa.eu.int/comm/competition/antitrust/Technology_transfer.

⁹⁴ EC Commission, Evaluation Report on the Transfer of Technology, *supra* note 22, No. 125, 127, 130 (c).

⁹⁵ Available at http://europa.eu.int/comm/competition/antitrust/legislation/entente3_en.html#technology.

⁹⁶ *See* Draft Block Exemption, *supra* n. 95. As a result, quantitative and customer restrictions generally become admissible, *see* Draft Guidelines, *supra* n. 95, No. 165 et seq., 173 et seq. . The relevant market shares are those of either the licensor or the licensee, whichever is more.

⁹⁷ *See* Art. 3, No. 1 draft block exemption regulation, *supra* n. 95. As to the treatment of horizontal agreements in general, *see* EC Commission, Guidelines on the applicability of Art. 81 of the Treaty to horizontal cooperation agreements, *supra* note 74.

even 25 %), except if they impose the typical unacceptable restrictions, namely, price-fixing, output and sales limitations, and allocations of markets or customers.⁹⁸

It is mainly with respect to multiparty agreements that, given the complexity of the legislative process,⁹⁹ the draft block exemption does not follow the Evaluation Report's suggestion for a broader exemption. However, the Draft Guidelines, when addressing the issue of multiparty licensing,¹⁰⁰ seem to take it for granted that these arrangements may benefit from the same treatment as bilateral agreements. At least they submit this proposition without further explanation. It is only with respect to technology pools that the Draft Guidelines take some pains to explain the reasons why and when they should be dealt with liberally, a matter which, indeed needs explanation, because pools do subject third parties seeking licenses to a collectively held bundle of exclusive rights.¹⁰¹

Under the modernized procedural regime for the enforcement of the Treaty's competition rules, block exemption regulations no longer validate otherwise provisionally invalid restrictive agreements – these are valid or invalid by direct operation of Art. 81(3) of the Treaty—but only shield them against *ex post* declaratory invalidation.¹⁰² The draft block exemption regulation and the all-encompassing Draft Guidelines, taken together, must accordingly be viewed as complementary and equally efficacious. They spell out a unitary and coherent policy, laid down in the Evaluation Report, which affirms an almost one-dimensional focus on realizing

⁹⁸ In addition, Art. 5 of the draft block exemption regulation (*supra* n. 95) excludes certain stipulations from the block exemption (but does not invalidate the agreement as a whole from the exemption), that oblige the licensee to grant back to the licensor exclusive licenses for severable improvements or to assign to him such improvements, or oblige him to abstain from challenging the validity of the licensed property rights.

⁹⁹ Extension of the block exemption to multiparty agreements would require an amendment of Council Regulation 19/65 of March 2, 1995 on the application of Art. 85(3) of the Treaty to categories of agreements and concerted practices, art. 1(1), 1965 J.O. (36) 553, which is the Regulation enabling the Commission to grant block exemptions by way of regulation.

¹⁰⁰ Draft Guidelines, *supra* note 95, No. 33.

¹⁰¹ Draft Guidelines, *supra* note 95, at No. 202 et seq.

¹⁰² See Council Regulation 1/2003 of December 16, 2002 on the implementation of the competition rules laid down in Arts. 81 and 82 of the Treaty, OJEC 2003 L 1, 1. The regulation abolishes the Commission's exclusive jurisdiction to grant exemptions by individual decisions as well as the notification requirement, and it thus switches from an *ex ante* control of restrictive agreements, and from the principle of provisional invalidity, to an *ex post* control by declaratory decision.

efficiency gains and on promoting innovation. Thus, in a concluding statement, the Report summarizes its "philosophy" as follows:

In reviewing the current rules and devising a future regime, account has to be taken of the fact that innovation in new products and new technologies are the ultimate source of substantial and major competition over time. Undue emphasis on short-term allocative efficiency may therefore create a socially unfavorable trade-off between static and dynamic efficiency.¹⁰³

3. *Outlook for the TRIPS Agreement*

The European Union's approach follows a trend set by the United States, in particular by the Department of Justice's and the Federal Trade Commission's Antitrust Guidelines for the Licensing of Intellectual Property.¹⁰⁴ The aim of the competition analysis is to bolster the licensor's incentives to innovate. The tools are, first, a narrow definition of the licensee as an existing potential competitor, and, second, a broad definition of the efficiency gains to be expected from restrictive licensing in terms of profit potentials and improvement opportunities accruing mainly, albeit not exclusively, to the licensor.¹⁰⁵

The perspective is that of competition as a dynamic process, with market power regarded as both ephemeral and necessary as a foundation for broad ranging innovation. The surprising result is that we are back to the reasonable reward doctrine, both conceptually and practically, in that the innovation incentives or the reward constitutes a promise stemming as much from a goal-oriented application of the antitrust laws as from the protection of intellectual property law. Conduct that restrains competition has become part of the innovation process, over and above the well-known restraints on trade inherent in, and guaranteed by, the exclusive rights of

¹⁰³ EC Commission, Evaluation Report, *supra* note 22, No. 190.

¹⁰⁴ *See supra* note 34.

¹⁰⁵ This follows from the liberal treatment of grant-back clauses, of tie-ins (both in terms of determining technically necessary and economically reasonable tying clauses), of all IPR-related restrictions in "vertical" relationships, and of most of them in horizontal relationships. *See* EC Commission Evaluation Report on the Transfer of Technology, *supra* note 22, No. 142, 146 et seq. (vertical customer restrictions and quantitative restrictions), No. 161 et seq. (tie-ins), No. 165 et seq. (grant backs); US Dept. Justice & FTC, Guidelines *supra* note 34, ¶5.3 (tie-ins), ¶5.6 (grant backs).

intellectual property law. The right holder is viewed as the innovator, the licensee as a follower.¹⁰⁶

From this angle, antitrust law serves to promote innovation, rather than competition, even though one might otherwise have supposed that innovation should be deemed a part of, and the result of, competition. This apparently forward looking focus of competition policy on not hindering innovation thus overshadows the fact that, while all the restraints on the licensee's use of IPRs that are tolerated today operate as a reward, they are in reality a grant of additional incentives (or a price) for tomorrow's unrestricted innovation.¹⁰⁷

The licensor is viewed as master of the game, whether or not he has market power, and the licensee is seen as an adopter, or at best, as an adapter. However, this approach ignores the possibility that the licensee might transform the licensed technology to suit his own needs and those of the market segment on which he operates, or that he might otherwise diversify its application, develop its potential, and create added value by contributing complementary technology or service know-how of his own. So long as this approach implements only a broad concept of intra-brand competition, which, in effect, is left to the control of patentees, and ignores the propensity for development of interbrand competition, the real potential for harm to competition is thus analytically and legally suppressed.

Whatever the merits of this policy orientation may be,¹⁰⁸ from a TRIPS perspective it implies much more than merely extending IPR-related competition policy beyond the licensing restrictions that the Agreement embraces. Here we are faced with a concerted effort in major markets to allow restrictive licensing agreements to reinforce the IPR-based protection of innovation opportunities and profits, with a

¹⁰⁶ See, e.g., DOJ/FTC Antitrust Guidelines, *supra* note 34, at ¶ 4.1.2; EC Commission's Evaluation Report on the Transfer of Technology, *supra* note 22, No. 117 et seq.

¹⁰⁷ These effects should not be overlooked when comparing and contrasting the innovation-oriented and dissemination-oriented competition policies. See e.g., N. Gallini & M. Trebilcock, *supra* note 4, at 25 et seq. (stressing undue separation of *ex ante* innovation incentives and *ex post* licensing incentives).

¹⁰⁸ For the various objectives, orientations, and instrumentalizations of competition policy see, e.g., D. Hart, *Antitrust and Technological Innovation in the US: Ideas, Institutions, Decisions, and Impacts, 1890-2000*, 30 RES. POL'Y 923 (2001) (for technical innovation); EUROPEAN COMPETITION LAW ANNUAL 1997: THE OBJECTIVES OF COMPETITION POLICY (Cl. Ehlermann & L. Laudati eds., 1998); D. GERBER, *LAW AND COMPETITION IN TWENTIETH CENTURY EUROPE: PROTECTING PROMETHEUS* 346 et seq. (2001) (for a European perspective); L. SULLIVAN & W. GRIMES, *supra* note 40, at 9 et seq (for a U.S. perspective).

view to enhancing the productive and innovative capacity of the IPR owner and to spurring the licensee to join in and cooperate with the former's projects.

The end result tends to undermine the political balance that was struck by the TRIPS negotiations. Competition law, rightly or wrongly,¹⁰⁹ had been looked upon as a counterweight, and as a means of enabling third parties to participate in the benefits of "adequate" intellectual property protection, in particular by safeguarding "the transfer and dissemination of technology", an objective set out in Article 7 of the Agreement.¹¹⁰ Suddenly, under the new dispensation, competition law turns out to support the exploitation of exclusive rights and innovation in general. The technological and competitive position of rights holders, the bulk of which reside in industrialized countries, is accordingly strengthened.

In principle, all countries remain free to formulate their own competition policies.¹¹¹ As a practical matter, however, full and successful enforcement of a conflicting national competition policy—for example, a policy that insists on refusing to validate tight grant-back clauses, broad tie-ins, or territorial or field-of-use restrictions with their potential for price discrimination—will become a difficult task so long as other countries allow such agreements, if only because licensors might choose their licensees accordingly. Striking down the exclusivity requirement in a grant-back clause or a limitation on the use of the licensed technology will concern only those intellectual property rights that have been granted under the laws of the enforcing State, not those granted elsewhere, even if covered by an "international" license. Therefore, while the domestic market may become liberalized, the overall competitive position of the licensee may not, and if domestic markets are too small for efficient exploitation, antitrust control may remain altogether ineffective.

At best, therefore, a technology-transfer oriented competition policy would be effective only at the local level. When assessed in the context of other adverse

¹⁰⁹ Politically, the ill-fated Code of Conduct on Transfer of Technology, *supra* note 11, and the ineffective Set of Multilaterally Agreed Principles, see R. Dhanjee, *The Set of Multilaterally Agreed Equitable Principles and Rules for the Control of Restrictive Business Practices - An Instrument of International Law?* 28 LEGAL ISS. ECON. INTEGRATION 71 (2001)), should have cautioned against any reliance on competition policy.

¹¹⁰ TRIPS Agreement, *supra* note 5, art. 7.

¹¹¹ See *supra* text accompanying notes 18 et seq..

competition policies,¹¹² it would most likely fail to promote the larger goal of enhancing the licensee's international competitiveness. Compulsory licensing to remedy discriminatory international licensing practices, even if applied in cases of merely relative market power, and even if lawful and legitimate,¹¹³ will not help except in a few really straightforward cases.

Over time, moreover, the systemic operation and constraints of this innovation-efficiency approach to competition policy are likely to limit the scope of sovereign policy decisions by technologically less advanced countries. For one thing, as evidenced by the example of the European Union's adopting the United States' approach, a pro-active competition policy with a focus on innovation itself constitutes a powerful means of regulating competition. It invites emulation by other countries that are already in, or wish to join, the innovation race, and it helps to disadvantage those countries that are technologically less advanced. This is true not only in economic terms, in the sense that such a competition policy might actually strengthen the innovation process, but also as a political fact of life. Because a pure dissemination rationale for competition policy can easily be criticized as being sort of parasitic and as hindering innovation, whereas a cooperative relationship between licensor and licensee might advance it, the dissemination approach to competition policy simply looks weaker than the innovation approach in political terms.

Given the overall framework of the GATT/WTO Agreements, of which the TRIPS Agreement is an integral part, the size of national markets becomes the basis for trade negotiations on market access and on ancillary considerations of market protection or regulation. In this context, countries possessing market power will have considerable leverage to push other countries to abandon dissemination-oriented competition rules as an impediment to investment, in exchange for access to markets.

This leverage is facilitated by the fact that, under the TRIPS Agreement, IPR-related competition policy is thought mainly to concern limiting domestic intellectual

¹¹² Put differently, it will lose in "regulatory competition", whether as a result of a "race to the bottom" or of a "race to the top" is a circular question in that it refers back to the issue of what is the right competition policy. See MONOPOLKOMMISSION, SYSTEMWETTBEWERB, SONDERGUTACHTEN, sub. 4.1 (1998) (pointing to the increased risks of "races to the bottom" precisely in case competition policy is instrumentalized for specific policy purposes).

¹¹³ See *supra* note 46. Little if any use has so far been made of rules against discriminatory conduct, which, under national law, apply to enterprises having relative market power. See for German law K. Markert in *GWB-KOMMENTAR ZUM KARTELLGESETZ* (U. Immenga et al. eds., 3d ed. 2001), at § 20 n. 170.

property protection, which, however, is deemed a necessary component of, rather than an impediment to trade. Because the countries holding strong intellectual property positions and adhering to innovation-oriented competition policies are precisely those that afford the most attractive markets for other countries, they would be in a position to extract onerous concessions from any Members that sought to persuade them to modify such a policy in favor of dissemination, in the unlikely event that this issue should ever reach the negotiating table. Powerful countries would counterargue, indeed, that in addition to its principal role of safeguarding free competition in domestic markets, competition policy was intended to strengthen the international competitiveness of industry by ensuring highly innovative home markets.¹¹⁴

Conversely, from the perspective of innovation-oriented countries, access to other markets by virtue of dissemination-based competition rules normally is not an issue. On the contrary, they would like to control these markets too, so as to further protect and bolster their own innovation efforts. The very reasons that led them to require "adequate" intellectual property protection abroad by bringing the TRIPS Agreement into the GATT/WTO framework will induce them to support, and, if possible, to export an innovation-oriented competition policy.

IV. CONCLUSION

Innovation-oriented competition policy extends largely beyond the narrow framework of the competition rules set out in the TRIPS Agreement. Unlike these rules, it follows an affirmative rather than a defensive strategy, and it does so on all fronts rather than only with respect to IPR-based restrictions. By its very objective, such a competition policy will supplement or expand rather than counterbalance the exclusivity effects of intellectual property protection. From the perspective of transnational globalized markets, which nonetheless remain territorially separable by virtue of national intellectual property laws,¹¹⁵ and which are economically different,

¹¹⁴ This applies both as a defense against inward competition by foreign rivals and as a tactic to foster outward competition on foreign markets; for a discussion of competition policy as "new trade policy" see R. S. Khemami & R. Schöner, *Competition Policy Objectives in the Context of a Multilateral Competition Code*, in EUROPEAN COMPETITION LAW ANNUAL 1997: THE OBJECTIVES OF COMPETITION POLICY 187, 239 et seq (Cl. Ehlermann & L. Laudati eds., 1998).

¹¹⁵ This potential for market separation explains the controversies surrounding exhaustion, as retained by Art. 6 of the TRIPS Agreement, and the TRIPS-conformity of compulsory licenses for the exportation of patented pharmaceuticals. See N. Zürcher Fausch, *Die Problematik der Nutzung von Zwangslizenzen durch Staaten ohne eigene Pharmaindustrie: Zur instrumentellen Umsetzung von*

the system's logic as well as the trade logic of such a competition policy tends to produce both extraterritorial conflicts and pressures for an internationally applicable uniform approach.

Within the TRIPS framework, an innovation-oriented competition policy would only in exceptional cases allow authorities to limit excesses of IP protection, namely, when they attract regulatory attention precisely because they obstruct innovation. This abstentionist view does not seem to conflict with the principles of the TRIPS Agreement. Instead of relying on competition policy to control excessive intellectual property protection, Members may directly revise their IPR laws to provide adequate levels of protection consistent with the flexibility that the TRIPS Agreement affords.¹¹⁶

Indirectly, however, a competition policy that views IPR-related restrictions through the lens of innovation and incentives raises problems for the balanced operation of the Agreement. The reason is that this bias tends to shift the political balance between intellectual property protection and the control of anticompetitive forms of exploiting IPRs which tacitly underlies the Agreement, too much to the side of intellectual property stakeholders. After all, exclusive rights operate as an incentive because they allow beneficiaries to control markets. In the minds of the developing country negotiators of the TRIPS Agreement, it was precisely this danger of external control of domestic markets by virtue of private IP rights that the competition rules in the TRIPS Agreement ought to allow domestic authorities to contain within adequate limits. An innovation-biased competition policy also tends to undermine the dissemination-oriented technology transfer objective of the TRIPS Agreement, and, generally speaking, the goal of technology access that has become so crucial today.

The innovation/dissemination alternative regarding IPR-related competition policy faces, of course, a potential conflict of its own. Because the innovation approach

Art. 6 der Erklärung zum TRIPs und zum öffentlichen Gesundheitswesen, 5 J AUßENWIRTSCHAFT 495 (2002); J. Bourgeois & Th. Burns, *Implementing Paragraph 6 of the Doha Declaration on TRIPs and Public Health*, 5(6) J. WORLD INT PROP. 835 (2002).

¹¹⁶ For the broad margin of discretion WTO Members enjoy under the TRIPs Agreement with regard to the legislative definition of the scope of intellectual property protection, see J. Reichman & D. Lange, *Bargaining around the TRIPs Agreement: The Case for Ongoing Public - Private Initiatives to Facilitate World Wide Intellectual Property Transactions*, 9 DUKE J. COMP. INT'L. L. 11 (1998); see also UNCTAD, *THE TRIPs AGREEMENT AND DEVELOPING COUNTRIES*, Geneva 1996, No. 83 et seq., 123 et seq., 176 et seq.

becomes more promising the larger the markets are to which it applies, collision with the dissemination approach will bring with it problems of a territorial split: dissemination claims will most likely be asserted by Members that are specifically affected by foreign dominance of innovation. Thus, there might arise a typical globalization problem in that multinational industry's interest in operating on and benefiting from transnational markets conflicts with the Nation States' interest in protecting and promoting industry in domestic markets. Once again, the problem reaches beyond TRIPs in that the innovation approach is all-embracing whereas the dissemination approach mainly focuses on licensing restrictions, at least as conventionally conceptualized in *ex post* adoption of certain technologies rather than in terms of *ex ante* participation through early information access.

One should not indulge in false hopes that the conflicts between, and the biased effects of, these two approaches may readily be overcome by “regulatory competition,” or by the harmonization of rules. The problem with both approaches is not any inherent theoretical or practical weakness, but precisely their policy orientation.

However well and objectively reasoned each may be in terms of economic theory, these policy approaches are chosen in accordance with politico-economic interests, either directly by rule-makers and governments, or indirectly by administrative or judicial authorities as they implement what they (tacitly) feel or (expressly) consider those interests to be. If economic globalization and the concomitant interdependency of global, regional and national markets with respect to their regulatory needs make international harmonization of competition law desirable,¹¹⁷ it can hardly succeed if this endeavor is based on either the interest-biased trade rationale of the TRIPS Agreement¹¹⁸ or on a policy approach to competition law, whatever its tint may be.

¹¹⁷ For this controversy see COMPARATIVE COMPETITION LAW: APPROACHING AN INTERNATIONAL SYSTEM OF ANTITRUST LAW (H. Ullrich ed., 1998), in particular the contributions by H. First, Theories of Harmonization: A Cautionary Tale (7 et seq.) and H. Ullrich, International Harmonization of Competition Law: Making Diversity a Workable Concept (43 et seq.); TOWARDS WTO COMPETITION RULES (R. Zäch, ed., 1999), in particular the contributions by F. Jenny, Competition-oriented Reforms of the WTO World Trade System – Proposals and Policy Options, (3 et seq.), E.U. Petersmann, Antitrust, Market Conceptualization and the World Trade Organization – The Convention (Approach (43 et seq.), H. First, Competition Culture and the Aims of Competition (95 et seq.); THE FUTURE OF TRANSNATIONAL ANTITRUST LAW (J. Drexel ed. 2003), in particular H. First, Evolving Toward What? The Development of International Antitrust (23 et seq.).

¹¹⁸ But see R. Marschall, Patents, Antitrust, and the WTO/GATT: Using TRIPs as a Vehicle for Antitrust Harmonization, 28 L. POL'Y. INT'L. BUS. 1165 (1997).

More precisely, if one were to extend the TRIPs Agreement, or to apply its trade mechanisms to IPR-related competition policy in general, the likely outcome would be that, instead of consensual competition rules limiting possible excesses of IP protection, the innovation-oriented approach would prevail. A better route to harmonization might accordingly be to return to old-fashioned principles, and to place more reliance on legal norms that focus on the virtues of a free- enterprise market organization rather than on the likely outcome of an efficiency-enhancing arrangement of competition.¹¹⁹

Needless to say, a proposal to reorient competition policy towards a system of essentially legal values is not likely to engender a mass movement in the near future. At a lower level of abstraction, where one might focus on the restrictive licensing of technological property, for example, it might prove more beneficial to try to overcome the innovation/technology-transfer conflict by abandoning the implicit assumption of an innovator/follower relationship.

Basically, a licensing agreement is a negotiated transaction, which poses a dilemma. However desirable licenses are both for licensor and licensee, they enable the licensee to eventually compete with the licensor. Hence, the licensor must be allowed to keep the licensee at a competitive distance or else the former might refuse to grant a license altogether.

Restrictive licensing is, therefore, often a precondition to licensing. All that antitrust control of the transaction must achieve is to ensure whether, and to what extent, these conditions appropriately occur, and to limit restrictive licensing accordingly. This is a free-market approach, which may be reconciled with a fairness approach to competition policy.¹²⁰ However, unlike the innovation-oriented approach of IP-related competition policy, this approach directly addresses a problem of maintaining competition rather than masking the existence of such a problem and contributing to the persistence of a relationship of innovation dominance and technological dependence.

¹¹⁹ H. Ullrich, *Competitor Cooperation*, in *THE FUTURE OF TRANSNATIONAL ANTITRUST LAW*, *supra* note 117

¹²⁰ For the distinction, see E. Fox, *supra* note 22, at 498 et seq. The approach advocated here is a competition approach, not one of equity or power compensation: it presupposes that only restrictions on competitive autonomy matter, not "unjust" prices or other "harsh" conditions.