Is there an Antitrust Antidote against IP Overprotection within TRIPs?

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IS THERE AN ANTITRUST ANTIDOTE AGAINST IP OVERPROTECTION WITHIN TRIPS?

MARCO RICOLFI*

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INTRODUCTION

As we all know, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPs) is about intellectual property (IP). However, TRIPs also contains a smattering of antitrust provisions. Do these provisions have any normative significance at all? And, if so, what is it? These questions may be looked at in a number of ways.

First, consider the TRIPs antitrust provisions in an international antitrust perspective. While the debate on the desirability of establishing different types of world antitrust rules is still underway, we may wish to take stock of the international antitrust rules that are currently in place. Even though these rules, on the whole, do not amount to much, they still may possess some attraction for scholars. This is because they have been around for a while and, thus, may provide us with some relevant evidence and possibly insights on whatever next step we may have in mind. In the latter regard, the competition rules contained in TRIPs are more likely to prove helpful than, say, the diminutive mini-body of antitrust rules contained in General Agreement on Trade in Services (GATS) or the so-called U.N.
Set because they are somewhat more detailed and comprehensive than the former and because, in contrast to the latter, they consist of “hard” rather than “soft” law.

Second, consider the competition law component of TRIPs as another chapter of the eternally self-renovating tale concerning the intersection between IP and antitrust. This perspective may also prove rather interesting. Indeed, the corresponding issues that originally emerged at the domestic level in the United States or Germany and subsequently obtained a regional dimension in the European Union during the last five decades have in the meantime reached the transnational stage thanks to TRIPs.

While I will not totally ignore these two perspectives, I do not intend to directly address them either. Rather, I propose to leave them in the background and, accordingly, concentrate on a different, more specific—if not unrelated—set of questions:

(1) Is it possible to distill a coherent set of rules from the fragmented antitrust provisions within TRIPs?

(2) Do these rules imply pro-competitive choices of more general relevance? And, if so, do they have any impact on the interpretation and application of other provisions contained in TRIPs?

(3) How wide is the spectrum of TRIPs-compliant, pro-competitive choices available to Members, and what are the options available under it?

(4) Does TRIPs contain within its antitrust portions a remedy to the gradual “ratcheting up” of IP protection that has been taking place in the last few decades and was decisively reinforced by TRIPs itself?

There is no denying that, by asking these questions, I am making quite a number of assumptions. The very idea that we are in a phase of overprotection of IP is theoretically questionable and empirically disputable. In fact, we should be ready to acknowledge that it is, in principle, dubious to talk about overprotection—as well as of underprotection—of IP once we admit that determining the optimal rate of innovation implies a conceptual impossibility. On the other

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hand, if we cast aside the theoretical level and try what may be
_described as an educated guess on the matter, then one has to concede
that the symmetrically opposite view, according to which we are
witnessing a phase of underprotection, has its supporters.\textsuperscript{6}

However, my own hunch is in the opposite direction; and, as
disputable as this view may be, I think I should dispense myself from
developing a full argument to support it in order to avoid changing the
subject of this work. Nevertheless, as I ultimately propose to inquire
whether an antidote to IP overprotection is to be found in TRIPs, I
should say something about the assumed “disease” before proceeding to
assess the appropriateness of the proposed “cure.” However, even in
this approach, I will confine myself to just a few remarks.

The reasons ordinarily given to account for the ratcheting up of IP
protection tend to focus on changes in the characteristics of either
technological innovation itself or of the legal process shaping its
regulation.

In the former perspective, it has been argued that in the last few
decades even commercially valuable innovation has shown a tendency
to be incremental rather than discrete while at the same time bearing
the very know-how that makes it valuable “on its face.”\textsuperscript{7} Such
innovation, it is argued, may fail to meet the high-access requirements
of patent law and simultaneously turn out to be unprotectable through
trade secret law. The resulting failure of traditional forms of IP
protection is seen as responsible for generating an increased call by
interested circles for the establishment of a variety of mini-monopolies
in the form of hybrid and sui generis regimes, often granting full
exclusivity under attenuated access requirements.

A similar and complementary argument is derived from the
perception that the originally extended trajectory that leads from the
scientific enterprise to its application on the market has collapsed or
shrunk to a bare minimum in areas such as the life sciences and digital
technology. Here, the trend seems to consist of moving IP protection

\textsuperscript{6} For a specially strident enunciation, see Mickey Cantor, \emph{Film Pirates Are Robbing Us All}, FIN. TIMES, Nov. 11, 2004, at Ak.

\textsuperscript{7} As shown in the case of plant varieties, semiconductor chips, databases and even
biotechnology. For a full treatment of this line of thought, see the abundant work of Jerome
H. Reichman, \emph{Legal Hybrids Between the Patent and Copyright Paradigms}, 94 COLUM. L.
REV. 2432 (1994) [hereinafter Reichman, \emph{Legal Hybrids}], and Keith E. Maskus & Jerome H.
Reichman, \emph{The Globalization of Private Knowledge Goods and the Privatization of Global
upstream and in having it cover disembodied knowledge rather than tangible material embodiments; and, where this is the case, the resulting power may be conferred “not only in product markets, but also in innovation markets.”

These technology-focused accounts seem to me complemented rather than displaced by legal-process scholarship. This latter strand of literature, in turn, points to a shift in legal change paradigms that occurred in the final decades of the last century. Indeed, regulatory competition, inducing sovereigns to engage in a race to the top and to imitate whatever increase in protection is noted in other jurisdictions, gives a quite straightforward account of the reasons why the dual calls for hybrid regimes and upstream protection have been heeded rather than disregarded on either side of the Atlantic and apparently also in Japan. In turn, the mechanism of “issue linkage” has proved perfectly apt to persuade even recalcitrant jurisdictions in the periphery to accept, as a level playing field, whatever high standards of protection have in the meantime been generated in the center of the world economy by the workings of regulatory competition.

Having said so much—or, rather, so little—we may turn back to our original questions. And, in doing so, we should proceed first to an analysis of the contents and architecture of those TRIPs provisions that specifically deal with antitrust law.

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9. The whole gamut of possible regulatory competition outcomes was encapsulated in two famous dissenting opinions by Justice Brandeis quite a long time ago. Either the different competing jurisdictions are seen as laboratories experimenting with diverse legal rules to strike whatever balance between conflicting interests appears appropriate to the relevant constituencies, State Ice Corp. v. Liebmann, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting), or, in the alternative, they may engage in a “race of laxity,” Louis K. Liggett Co. v. Lee, 288 U.S. 517, 557–559 (1933) (Brandeis, J., dissenting), to favor concentrated interests (typically, business interests) or cut down on the level of protection of dispersed interests (typically, outside investors’ and consumers’ interests).
I. TRIPS Antitrust Provisions

A. Contents and Architecture

1. The Relevant Provisions

Usually commentators, in identifying TRIPs provisions dealing with antitrust, refer to (a) Articles 40, (b) Article 8(2), and (c) Article 31(k). I suggest that we go a step beyond by including (d) Article 67 and possibly Article 66(2).

(a) Article 40, as indicated in the title of Part II, section 8 of TRIPs, entitled “Control of Anti-Competitive Practices in Contractual Licenses,” is confined to the scrutiny of “licensing practices or conditions pertaining to intellectual property rights.” While the final two paragraphs of this provision deal with procedure (in a manner that closely parallels paragraphs 1 and 2 of Article IX GATS), the substantive part of this text is found in its first two paragraphs. The first paragraph is strikingly philosophical; rather than describing behavior that may be subject to antitrust scrutiny, it clarifies the rationale under which the international community may approve of Members’ legal intervention to restore competition. “Members agree that some licensing practices or conditions pertaining to intellectual property rights which restrain competition may have adverse effects on trade and may impede the transfer and dissemination of technology.” It would seem that the “appropriate measures to prevent or control such practices,” enabled by the second paragraph, may be in compliance with the TRIPs provisions insofar that they are intended to reestablish competition in furtherance of a broad range of goals and that these include not only the reassertion of competition in itself but also the preservation of freedom of trade and—remarkably enough—the promotion of the transfer and dissemination of technology.


12. TRIPs Agreement, supra note 1, art. 40(1) (emphasis added).

13. Id.

14. Id. art. 40(2).

15. It should be noted that under Article 40(2), an “adverse effect on competition in the relevant market” is still required. Id.; see also Ullrich, supra note 8, at 406 n.21 (“The restrictive nature of a technology transfer agreement is made a necessary connecting factor for its control, but not a factor determining the outcome of the control.”).
The second paragraph contains a non-exhaustive list of practices that may be outlawed or controlled by Members’ legislation.\(^\text{16}\) The list is drawn from clauses usually found in patent and know-how licensing agreements. Nothing prevents its extension to cover trademark and copyright (or software) licensing—as well as other dealings in intellectual property—to the extent that these kinds of agreements may impact trade and technology transfer, even though the history of the negotiations leading to the signing of TRIPs suggests that the parties had in mind the more traditional forms of technology transfer agreements.\(^\text{17}\) Moreover, Members appear free to opt for per se rules or, in the alternative, for the resort to the rule of reason or for a combination of the two, as it is more likely in the context of technology licensing.

However, the control and prevention are limited to licensing practices and conditions; therefore, it cannot encompass unilateral behavior, such as a refusal to deal or discriminatory behavior, even though it might as well also cover horizontal agreements like reciprocal licensing or those licensing provisions that are often to be found as ancillary features in patent pools and in research and development joint ventures.

(b) For its own part, the provision contained in Article 8(2) is not subject to any such limitation. “Appropriate measures, provided that they are consistent with the provisions of this Agreement, may be needed”\(^\text{18}\) —in the judgment of Members in the process of “formulating or amending their laws and regulations”\(^\text{19}\) —“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.”\(^\text{20}\) There is no question that this provision enables the prevention and control not only of bilateral and multilateral dealings—agreements between two or more parties—but also of unilateral behavior, including refusals to deal and other forms of exercising IP that may be deemed to constitute abuse.

Once again, as in Article 40(2), measures specifically targeting

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16. See TRIPs Agreement, supra note 1, art. 40(2).
18. See TRIPs Agreement, supra note 1, art. 8(2).
19. See id. art. 8(1).
20. See id. art. 8(2).
restrictions in international transfer of technology find a special place here. The disjunctive “or” in Article 8(2) clarifies that adverse impact on the international transfer of technology may in itself be a sufficient basis for legislation controlling IP abuse or dealings.\(^\text{21}\)

Also, this provision makes a clear, specific reference to technology transfer agreements; but, it does so in order to provide a representative example rather than restrict the scope of its application.\(^\text{22}\)

(c) Unilateral anti-competitive behavior may also be prohibited by Members’ rules that have been adopted in conformity with Article 31(k). Even more to the point, in connection with practices “determined after judicial or administrative process to be anti-competitive,”\(^\text{23}\) control measures by Members may be stricter than in all other situations permitting compulsory licensing of a patent under Article 31. Specifically, the conditions otherwise set forth in Article 31(b) (prior request to the right holder) and Article 31(f) (limitation of exploitation of the licensed patent “predominantly for the supply of the domestic market of the Member”\(^\text{24}\)) resorting to compulsory licensing) may be waived when anti-competitive behavior by the patentee is established. Moreover, in an antitrust context and in accordance with the second sentence of Article 31(k), “[t]he need to correct anti-competitive practices may be taken into account in determining the amount of remuneration,”\(^\text{25}\) which should lead to reducing the remuneration under Article 31(h) to a rate lower than the “adequacy” level otherwise mandated by the same provision.\(^\text{26}\)

(d) Finally, I subscribe to the view\(^\text{27}\) that an antitrust component is also to be found within the “Transitional Arrangements” of Part VI of

\(^{21}\) A similar point is made by Hanns Ullrich. Ullrich, supra note 8, at 406; see also Odman, supra note 11, at 348–349.

\(^{22}\) However, the procedural provisions of Article 40(2)–(3) can come into play only in connection with “licensing.” See Andreas Heinemann, Antitrust Law of Intellectual Property in the TRIPs Agreement of the World Trade Organization, in FROM GATT TO TRIPS: THE AGREEMENT ON TRADE-RELATED ASPECTS OF INTELLECTUAL PROPERTY RIGHTS 239, 247 (Friedrich-Karl Beier & Gerhard Schricker eds., 1996); see also Odman, supra note 11, at 350 (indicating that positive comity might come into play here, but only to the extent that the member state of the IP holder sees fit).

\(^{23}\) TRIPs Agreement, supra note 1, art. 31(k).

\(^{24}\) Id. art. 31(f).

\(^{25}\) Id. art. 31(k).

\(^{26}\) On the other hand, I am not sure I can distinguish between the specific compulsory licensing termination requirements under Article 31(k) and the general rule under Article 31(g).

\(^{27}\) See Odman, supra note 11, at 351–53.
TRIPs, and more specifically, in the provisions devoted to cooperation duties of developed member countries towards developing and least-developed member countries. Accordingly, I submit that technical cooperation under Article 67 extends to the preparation of laws and regulations on the prevention of abuse of intellectual property rights, including anti-competitive abuses. It may be argued that Article 66, in providing that “[d]eveloped country Members shall provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least-developed country Members in order to enable them to create a sound and viable technological base,” also implies that such incentives fully conform to the duties under the TRIPs only to the extent that they minimize the competition-restrictive features of technology licensing.

2. Antitrust as TRIPs Subject Matter

What is the relevance of the provisions sketched above within the larger body of TRIPs? Language found in various parts of TRIPs suggests that the provisions at the intersection of antitrust and IP belong to the “subject matter of TRIPs.” Thus, Article 3(1), note three, clearly states that “[f]or the purposes of Articles 3 and 4, ‘protection’ [of intellectual property] shall include matters affecting the availability, acquisition, scope, maintenance and enforcement of intellectual property rights as well as those matters affecting the use of intellectual property rights specifically addressed in this Agreement.” It would appear quite plain that the anti-competitive and abusive practices discussed above affect the use of intellectual property rights and are specifically addressed in TRIPs itself; thus, they are to be considered as TRIPs subject matter for the purposes of Articles 3 and 4. This conclusion appears confirmed by Article 63, a provision that triggers an obligation to make certain information publicly available, that is, transparent. Even there, “the subject matter of this Agreement” is identified with “the availability, scope, acquisition, enforcement and prevention of the abuse of intellectual property rights.”

That the mini-body of antitrust within TRIPs belongs to the subject matter of the Agreement is a conclusion that has a number of

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28. TRIPs Agreement, supra note 1, art. 66(2).
29. See Odman, supra note 11, at 345–46, 351–53.
30. For a similar conclusion, see Odman, supra note 11, at 26, 15.
31. TRIPs Agreement, supra note 1, art. 3(1) n.3 (emphasis added).
32. Id. art. 63(1) (emphasis added).
implications. I will come back to one of them below in Part I.B.3. For the moment, I should remark that one of the consequences of considering the provisions sketched above as part and parcel of TRIPs is that the national treatment and most-favored nation treatment clauses under Articles 3 and 4 apply. This should hardly come as a surprise because the language of note three specifically addresses the question of what issues are TRIPs subject matter “[f]or the purposes of Articles 3 and 4.” Also, I submit that it does make sense that provisions at the intersection of antitrust and IP comply both with a negative obligation, such as the prohibition of discriminations based on nationality mandated by Article 3, and with a positive obligation as to the immediate and unconditional extension of “any advantage, favour, privilege or immunity granted by any Member to the nationals of any other country” to “the nationals of all other Members.” After all, the principle whereby all businesses are subject to the same rules in the marketplace independently of their nationality belongs to the very essence of competition laws around the world.

So far, I have referred only to the substantive part of the provisions sketched above in Part I.A.1. Indeed, I do have doubts that one may draw similar inferences in connection with their procedural parts and in particular with the establishment and operation of cooperation agreements in the field of antitrust, even though they may contribute to implementing Articles 40(3) and 40(4). Building a network of agreements in the field of antitrust cooperation is a time-consuming enterprise that experience shows must be tailored to the specifics of the individual countries or groups of countries. Experience also shows that these networks, once initiated, tend to expand to gradually encompass a larger number of jurisdictions. However, an immediate and unconditional extension under a most-favored nation principle may prove counterproductive here. Member A, while inclined to experiment on antitrust cooperation with the authorities of Member B, may retreat in doubt if identical rules were to be applied automatically in its relations with all other jurisdictions. Therefore, it is possible to argue

33. TRIPs Agreement, supra note 1, art. 3(1) n.3.
34. Id. art. 4.
that—if we wish to avoid creating disincentives to the conclusion and gradual extension of cooperation agreements in the field of antitrust—we should steer clear of applying to them Article 3 and particularly Article 4 of TRIPs. 37

3. Enabling and Mandatory Features

What do we make out of this set of provisions? It has been noted that TRIPs “promotes a globally harmonized intellectual property regime” while leaving “competition policy to the sovereign determination of Members and their regional economic institutions,” thereby relying on “a patchwork transnational regime rooted in a multiplicity of national and regional competition laws.” 38 It has also been remarked that by failing to consider “other potentially anti-competitive arrangements, including mergers and acquisitions,” 39 TRIPs adopts a narrow focus in designing the antitrust and IP intersection. 40

I agree with the descriptive part of this analysis. Nevertheless, I would not subscribe to the conclusions inferred from it and certainly would not accept that here “expansionist intellectual property protection” interfaces with “reductionist competition rules.” 41

Indeed, as far as coverage is concerned, TRIPs antitrust provisions nicely dovetail with what is understood to be the core of classic antitrust law both in the United States and in the European Union, namely the prohibition or control of bilateral and unilateral anti-competitive behavior or, in other words, agreements in restraint of trade and monopolization (in European parlance, abuse of dominant position). It is certainly true that mergers are not mentioned at all by TRIPs; however, this only means that Members’ freedom to institute merger controls and to take into account IP factors in assessing their admissibility is unfettered, rather than restricted.

On the other hand, TRIPs also contemplates in Articles 8(2) and

38. See Ullrich, supra note 8, at 404.
39. See id. at 405.
40. See id.
41. Notice, however, that the title selected by Ullrich refers to the “reductionist” character of competition rules not on the basis of their wording and position within TRIPs, but as a consequence of the more general developments of antitrust law. See Ullrich, supra note 8, 417–27; see also infra Part II.B.2.
40(2) measures specifically targeting restrictions in international transfer of technology. This feature does not necessarily belong to what is usually seen as the core of antitrust in U.S. and E.U. laws. Nevertheless, this “development component” included in TRIPs may be seen as an apt complement to classic competition rules. In the light of prior negotiations, its inclusion in an international text largely dedicated to North-South IP dealings appeared entirely appropriate.

It may be argued that TRIPs antitrust provisions are enabling rather than mandatory in character. This conclusion, while partly true, does not detract at all from their effectiveness and reach. Indeed, most of the provisions listed earlier (with a few minor exceptions that we are going to look at briefly) are not mandatory because Members are by no means under a legal obligation to adopt them. Surely, if a Member abstains from enacting provisions providing for the prohibition and control of IP-related anti-competitive practices, this legislative option is, in principle, unobjectionable and cannot lead to a complaint under the Dispute Settlement Understanding (DSU), as would be the case in connection with a failure to enact and implement TRIPs-mandated IP protection.

However, it should also be clear that in this context the enabling character of TRIPs is apt to expand rather than to restrict the lawmaking powers retained by Members at the intersection between IP and antitrust. The very fact that TRIPs, while extensively and intensively harmonizing intellectual property, confines itself to deferring to Members’ lawmaking powers in this area confers a quite special meaning to the reticence employed by the Agreement in describing anti-competitive or otherwise restrictive behavior and remedies available against them. Indeed, saying so little in the international instrument means, by necessary implication, recognizing a correspondingly expansive latitude to the relevant domestic lawmaking powers retained by the Members. In this regard, one might well say that the otherwise


43. See U.N. Set, supra note 4; see also supra note 14.

44. See supra text accompanying notes 39–41.

over-prescriptive TRIPs builds in this area an architecture based on authorization plus reticence, whereby this formula alludes to a combination of deference to Members’ lawmaking authority in antitrust and caution in detailing the extent of the powers retained by the Members themselves.

It has been argued that “the open-ended wording of [Articles] 8.2. [and 40] suggests that [these provisions were] intended as . . . rule[s] of containment for national competition policy rather than as a norm informing the proper development of such policy.” My view is just the opposite. Surely, an international antitrust agreement along the lines envisaged by section 20 of the World Trade Organization (WTO) Ministerial Declaration issued in Singapore during December of 1996 might have functioned as an effective rule of containment for national competition rules; and, precisely for this reason, it was rejected in Cancún by a coalition of developing countries two years ago. It is possible that the original intent of the trade representatives for developed countries in the last stage of TRIPs negotiations was to resist the claims made by developing countries’ representatives in this area and to establish some sort of a rule of containment for national competition policies. If this is so, then resorting to open-ended language through enabling provisions, as the ones sketched above in Part I.A.1, was clearly a self-defeating option. Indeed, by refraining from detailing the limits set by international public law to municipal

46. See Ullrich, supra note 8, at 414.


48. For a provisional assessment of this outcome, see Taimoon Stewart, The Fate of Competition Policy in Cancún: Politics or Substance?, 31 LEGAL ISSUES OF ECON. INTEGRATION 7, 7 (2004).

sovereigns' jurisdiction in the area at the intersection between antitrust and IP, TRIPs has gone exactly the other way. Not surprisingly, careful scholars have not hesitated to identify, in the enabling character of the relevant provisions, a confirmation of the “neofederalistic underpinnings of TRIPs.”

I fully subscribe to this view in general, particularly in connection with the room for maneuvering left to Members in this field.

Having said so much about the expansionary thrust of the enabling features of TRIPs provisions at the intersection of IP and antitrust, one should not forget that these also incorporate quite a substantial number of mandatory features. This is certainly the case in connection with the notion of measures “consistent with the provisions of this Agreement” under Articles 8(1), 8(2) and 40(2). We shall look at these in the next section; however, we should note in passing that a Member adopting measures at the intersection of IP and antitrust in breach of Articles 8(1), 8(2) and 40(2) would certainly be liable to be brought before a WTO panel under Article XXIII(1)(a) of the General Agreement on Tariffs and Trade (GATT) 1994.

Other mandatory features are also found in a number of the provisions discussed earlier. Express refusal or unjustified failure to enter into the consultations provided for by Articles 40(3) and 40(4) may constitute a breach relevant under the DSU. It cannot even be ruled out that Member behavior fostering anti-competitive practices by intellectual property rights owners that are nationals or residents of that Member may be in direct breach of Article 8(2). The same conclusion may be reached in connection with Member tolerance of anti-competitive practices by intellectual property rights owners who are nationals or residents of that Member, to the extent the same practice would be proscribed if its effects were felt on the domestic market of the same Member and would be condoned on the sole ground that its effects are felt only on foreign markets.

Similarly, an actionable breach may be found under Article 67 in the event a request for assistance in the preparation of laws and regulations on the prevention of the abuse of intellectual property rights is expressly refused or, even if accepted, proves obviously inadequate.

On the other hand, it has been persuasively argued that the obligation by developed member countries under Article 66(2) to

\[50\] See Dinwoodie & Dreyfuss, supra note 8, at 447.

\[51\] For a similar conclusion, see Abbott, supra note 10, at 692–93, 698.

\[52\] See Odman, supra note 11, at 362–64.
provide incentives to enterprises and institutions in their territories for the purpose of promoting and encouraging technology transfer to least-developed country Members in order to enable them to create a sound and viable technological base is not directly actionable, because compliance with it is based on a best-efforts standard. I am inclined to agree to the extent we visualize least-developed member countries as plaintiffs. However, I am not sure that the same conclusion would apply in the reverse situation in which the least-developed member country could find itself in the position of defendant as a consequence of a separate breach of another TRIPs provision. Theoretical analysis conducted a few years ago found that this kind of situation has a high statistical rate of probability; therefore, it may be of some practical relevance to question whether a defendant Member could raise a clean-hands defense or even a counterclaim on the basis of non-compliance with Article 66(2) by the plaintiff Member. If this were so, then Article 66(2) would also end up being an actionable provision under the DSU.

4. The Notion of Measures “Consistent with the Provisions of this Agreement”

There is no doubt that the constraints posed on Members’ discretion to enact legislation at the intersection between IP and antitrust belong to the mandatory component of TRIPs and, therefore, should be taken seriously. In spite of what I have been arguing about the “architecture of authorization plus reticence” of TRIPs in this area, the flexibility of Members in connection with the shaping of their laws in this field is far from being unfettered, as we shall presently see.

It has been remarked that Articles 8(1), 8(2) and 40(2), by requiring that the measures contemplated therein are “consistent with the provisions of this Agreement,” establish “only a safety zone for the core of intellectual property protection,” and that from these provisions it follows that Members “may not use antitrust regulation as

53. TRIPs Agreement, supra note 1, art. 66(2).
54. See Ernst-Ulrich Petersmann, From Negative to Positive Integration in the WTO: The TRIPs Agreement and the WTO Constitution, in 3 World Trade Forum, Intellectual Property: Trade, Competition, and Sustainable Development, supra note 47, at 21, 32. The opposite view is expressed by Odman, who believes the provision to be directly applicable. Odman, supra note 11, at 351–54.
56. TRIPs Agreement, supra note 1, art. 8(2).
57. Ullrich, supra note 8, at 410.
a pretext to undermine the protection of IP rights as guaranteed by the TRIPs Agreement."

I believe that this is just about right; but, we should explore what the words “the core of IP protection” and “undermining” may exactly mean.

In this regard, I should note that, historically, GATT 1949 subjected the exercise of domestic powers to a general test of reasonableness and two accompanying criteria. Measures dealing with IP were not to be applied in ways that “would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail” or in ways that constitute “a disguised restriction on international trade.” The impact of these criteria over reserved domestic powers has usually been regarded as limited because the same criteria were based on traditional international trade negative obligations and were applied only to trade in goods. Thus, it is typically discriminatory IP treatment of imports or exports of tradeable goods that is subject to GATT scrutiny.

The WTO Agreement supersedes GATT but adds additional layers of international rules that take the shape of both negative and positive obligations. The latter include, as indicated, the most-favored nation treatment and a wide range of uniform minimum standards of IP protection. In turn, minimum standards—built by incorporating a substantial number of new specific TRIPs provisions to the major international IP conventions—currently extend well beyond the original list. In this latter context, the issue of compatibility is visualized as a question of levels of protection of IP assets or, more precisely, of achieving the mandate of uniformity in minimum standards, rather than as an issue of discriminatory treatment of imports and exports of tradeable goods.

Whatever discretion is retained by Members and whatever flexibility in implementing TRIPs is granted to them, the precept of uniformity in minimum standards of protection and the dual principles of national

58. Id.
60. These provisions are still to be found in the General Agreement on Tariffs and Trade, Oct. 30, 1947, art. XX & XX(d), 61 Stat. A-11, 55 U.N.T.S. 194.
61. For a similar point, see Petersmann, supra note 54, at 27, and Silke Von Lewinski, The Role of Copyright in Modern International Trade Law, 161 REVUE INTERNATIONALE DE DROIT D’AUTEUR 1, 11 (1994).
treatment and most-favored nation treatment are mandatory in character and therefore to be fully respected. Recital 6 and Article 1(1), while allowing for flexibility in domestic lawmaking, are also extremely clear in connection with the other side of the coin. As remarked earlier, both national treatment and most-favored nation treatment concern not only IP protection but also the antitrust measures connected with it. More importantly, flexibility is limited to methods of protection; conversely, the net outcome of mandated minimum protection is non-negotiable. The last sentence of Article 1(1) states the following: “Members shall be free to determine the appropriate method of implementing the provisions of this Agreement within their own legal system and practice.” But the first sentence, ostensibly dealing with net outcomes, is crystal clear: “Members shall give effect to the provisions of this Agreement.” Thus, while Members retain the power to enact domestic measures at the intersection of antitrust and IP along a wide spectrum of choices, these are permitted only insofar as they comply with national treatment and most-favored nation obligations and do not compromise uniform minimum standards of IP protection.

However, even accepting this, we should question what, in each case, are the net outcomes of IP protection envisaged by TRIPs, and, more specifically, whether the interpretation of TRIPs-mandated uniform standards provisions should give an appropriate place to TRIPs general principles, and what may be the impact of the latter on the former.

B. The Interplay Between Antitrust Provisions and General Principles

So far, we have looked at the contents, character and role of the antitrust fragments (including what I earlier called the “development component”) located in TRIPs. While this may provide some reply to the questions initially raised in question (1) of the Introduction, we certainly should not rest with this kind of very broad, general finding.

To deal with the issues raised in questions (2) and (3) of the Introduction, we should now explore the link between these antitrust provisions and the TRIPs’ general principles and inquire whether the interplay between the two sets of provisions may give greater relevance to pro-competitive values and may affect the amount of flexibility retained by Members.

63. TRIPs Agreement, supra note 1, art. 1(1) (emphasis added).
64. Id.
65. See supra Part I.A.3.
More specifically, we should proceed in the direction indicated at the close of the previous paragraph and explore the impact that the general principles may have on the interpretation and application other TRIPs provisions, including the mandate of TRIPs-consistency and the place in this connection given to non-IP interests. These interests include the claims for access to the existing intellectual property assets made by two groups: (1) current users of technology-incorporating goods and (2) subsequent generations of innovators bent on generating downstream innovation based on prior technological knowledge.  

In doing so, we should additionally inquire at which level a general principles-based approach may become relevant in Members’ law-making process. Should we confine consideration of pro-competitive inputs and of non-IP interests only to the areas specifically at the intersection between antitrust and IP or should we extend this approach to the so-called “development component,” particularly in connection with measures specifically targeting international transfer? Or finally, should we go all the way to envisage the possibility that pro-competitive inputs, rather than being superimposed from the outside on the exercise of IP by means of ex post antitrust measures, may instead be incorporated ex ante from within the legislative design of individual IP rights?

1. The Historical Background

Frankly, if we were to confine ourselves to looking at the legislative history of the process that led to the negotiation and adoption of TRIPs, we could not expect much in terms of adoption of pro-competitive values and flexibility intended to accommodate the claims for access to IP assets made by current users and future innovators. The corresponding tale has been told a number of times and is roughly made of three ingredients.

First, IP has become part and parcel of the new GATT-WTO framework because low standards of IP protection in the South have

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66. On the characteristics of technological innovation that make it more dependent than in the past on prior strata of accumulated knowledge, see Reichman, Legal Hybrids, supra note 7. For a thoughtful analysis of the standing of the claims of current users and future innovators within TRIPs, see Carlos M. Correa, Pro-Competitive Measures under the TRIPs Agreement to Promote Technology Diffusion in Developing Countries, 4 J. WORLD INTELL. PROP. 481 (2001).

been conceptualized as a barrier to trade, hindering or restraining the flow of Northern IP-incorporating goods and services toward the South that otherwise would have occurred on a level playing field based on uniform minimum conditions of IP protection. Second, this “producer driven governance model”\(^\text{68}\) of IP, shaped by the “traditional export interests” prevailing in the North,\(^\text{69}\) has been grudgingly accepted by the South in exchange for the promise that the latter’s goods, including agricultural products and textiles, would obtain access to the rich consumer markets of the North. Third, the acceptance of TRIPs-mandated levels of IP protection was far from enthusiastic and unqualified. Before adopting the “package,” developing countries insisted that the monopolistic potential of stronger IPs should be, at least in part, counterbalanced by accommodating a competition law component in TRIPs.\(^\text{70}\)

Against this background, we might well have expected that the antitrust component is just another case in which, as it often happens, weaker interests obtain symbolic rewards while concentrated, stronger interests obtain tangible benefits.\(^\text{71}\) My idea is that in TRIPs there is much more than that; and, that this more expansive understanding is a necessary implication of TRIPs’ general principles.

2. Recitals 5 and 6 and Articles 7 and 8(1) of TRIPs

Let us look more closely at the text of TRIPs. Recital 5 to the Preamble clearly envisages intellectual property protection not as an end in itself but rather as a means to achieve further ends. The Members “recogniz[e] the underlying public policy objectives of national systems for the protection of intellectual property, including developmental and technological objectives.”\(^\text{72}\) Recital 6 addresses the specific concerns that arise in connection with least developed member countries: “[r]ecognizing also the special needs of the least-developed country Members in respect of maximum flexibility in the domestic implementation of laws and regulations in order to enable them to


\(^{70}\) For references, see sources cited *supra* note 49.

\(^{71}\) See *Braithwaite & Drahos*, supra note 17, at 193.

\(^{72}\) TRIPs Agreement, *supra* note 1, rec. 5.
create a sound and viable technological base.” Article 7 clearly states that “[t]he protection and enforcement of intellectual property” are means intended to achieve a number of goals. It should be underlined that such goals only in part coincide with the classical policy rationale for protecting IP, the grant of protection as an incentive for the provision of a public good. More specifically, it seems quite remarkable that the text of Article 7, while stressing that IP protection and enforcement “should contribute to the promotion of technological innovation,” does not stop there as one might have expected. Rather the provision goes on to mention an additional purpose, “the transfer and dissemination of technology,” that appears from the wording of Article 7 to have the same cogency as the former one.

It could be argued that we should not read too much in the reference to “the transfer and dissemination of technology.” After all, the more sophisticated analysis of IP has shown quite a long time ago that IP is concerned not just with incentives to the provision of innovation but also with incentives to its dissemination. This is what Arrow’s Disclosure Paradox is all about. Except that, given the historical background, one might read in the dual reference to “transfer and dissemination,” which occurs both in Article 7 and in Article 40(1) in exactly the same words, some kind of acknowledgement of the dual claims of current users of technology-incorporating goods and future innovators.

I submit that this reading is not so far-fetched as it appears at first sight. And my argument builds on the final part of the wording of Article 7. Indeed, it should be considered that this provision, after mentioning the purposes of IP protection I just discussed, goes on and refers to nothing less than “the mutual advantage of producers and users of technological knowledge” and expresses a clear option in favor of IP protection modes shaped “in a manner conducive to social and economic welfare, and to a balance of rights and obligations.”

This is really a gradual—and “grand”—opening of perspectives. One is reminded of a traveling along a route on the bottom of the valley.

73. Id. rec. 6.
74. Id. art. 7.
75. See Arrow, supra note 5.
76. TRIPs Agreement, supra note 1, art. 7.
77. Id.
78. See Arrow, supra note 5, at 615.
79. TRIPs Agreement, supra note 1, art. 7 (emphasis added).
when the progress of the road keeps disclosing a number of lateral views. Intellectual property is the means because it serves two immediate purposes: incentive for the provision of a public good and for its transfer and dissemination. But there is more to it, because even these purposes are not ends by themselves but should serve additional, broader societal aims. Several of these broader aims are specifically mentioned in Article 8(1). Among these, competitive concerns, including the claims of current users and future innovators, should not be disregarded if the mandate of Articles 7 and 8(2) is to be taken seriously.

3. Taking the General Principles Seriously

But then, should we really take the TRIPs’ general principles seriously? This is a serious question, not a rhetorical one, because we may suspect that some portions of TRIPs may amount to nothing more than “window dressing.” This suspicion, which usually crops up when a “development component” is superimposed on international trade compacts, might be examined by asking what the reference to “social” welfare adds to the usual economic characterization of welfare itself, which, as it is now commonly recognized, encompasses distributional and fairness concerns on top of allocative and productive efficiency goals. Also, the reference to a balance of rights and obligations may seem as vague as it is broad.

However, these broader societal concerns seem in fact to have been given appropriate consideration by the international community on a number of occasions. Non-IP interests, particularly of users, were taken into account in the August 2003 deliberation, leading to the WTO decision on the Implementation of Paragraph 6 of the Doha Declaration on the TRIPs Agreement and Public Health. And one may well discern that efforts currently under way to make the patent system mutually supportive with the objective of preserving and fostering

80. As exemplified by the thoughtful remarks by Simon J. Evenett, Systemic Research Questions Raised by the Failure of the WTO Ministerial Meeting in Cancún, 31 LEGAL ISSUES OF ECON. INTEGRATION 1, 5 (2004) (noting that some argue that the “Doha Ministerial Meeting is unimportant windowdressing”).

biodiversity\textsuperscript{82} can be better visualized under the heading of “social welfare,” because this notion implies a respect for the autonomy of the (also non-IP) values of indigenous communities that may well defy the flatness of the \textit{calculus felicificus} at which economists are so adept. So, arguably the characterization of IP as a means to achieve a variety of goals under Article 7, including concerns about access by current users and future innovators, does have some meaning after all.

Of course, one could say that there is an altogether different reason why TRIPs visualizes IP as a means rather than as an end. As it has been quite rightly remarked,\textsuperscript{83} TRIPs is not an exercise in harmonization of intellectual property. Harmonization and uniformation is what the European Union does; but then, the European Union is about building shared legal institutions within an economic and political union. The overall purpose of WTO and TRIPs is altogether different and precisely consists of the minimization of trade barriers, including those arising out of divergence in IP. Therefore, IP protection and enforcement are seen as means rather than ends in themselves. This seems quite true to me; except that, in my opinion, this is only a part of the story. A closer reading of TRIPs, as confirmed by subsequent behavior of Members and international institutions of the kind I just mentioned, shows that IP protection and enforcement are seen as means rather than ends in themselves \textit{both} because the larger ends encompass freedom of trade—there is no way to deny this—and \textit{and} because the international community is committed to taking into account other non-trade and non-IP factors while shaping IP protection.

It would seem to me that pro-competitive concerns, including access by “users of technological knowledge” under Article 7 such as current users and future innovators, rank pretty high in the list of these other purposes that are declared relevant by TRIPs principles. One could even go so far as to argue that this conclusion is a necessary implication of the very architecture of TRIPs, which considers competition law at the intersection with IP as its own subject matter.\textsuperscript{84} Therefore, recitals 5 and 6 and Articles 7 and 8 should be taken seriously.

\textsuperscript{82} In this connection, one cannot be but impressed by the declarations of the then E.U. Trade Commissioner Pascal Lamy, \textit{Trade-Related Aspects of Intellectual Property Rights—Ten Years Later}, 38 J. \textsc{World Trade Law} 923, 928 (2004) (noting the reasons supporting the incorporation of “a requirement into the TRIPs Agreement that patent applicants should disclose the geographical source origin of the genetic material and the related traditional knowledge used in an invention”).

\textsuperscript{83} Ullrich, supra note 8, at 408, 414.

\textsuperscript{84} See supra Part I.A.3
Maybe what I am saying has a distinctively European ring to it. The European Union, in IP matters as well as in a number of other areas, seems to be moving back and forth between self-serving and short-term motives, such as the creation of overprotective and protectionist regimes concerning database and design protection and occasional attempts to place itself on the moral high-ground. Maybe this latter attitude is the basis of the positions of some high-ranking E.U. officials, such as the former E.U. Trade Commissioner Pascal Lamy who when commenting on the first decade of TRIPs insisted on views similar to the ones I expressed here about TRIPs principles.\footnote{Lamy, supra note 82, at 925.} Intellectual property rights are just “tools.”\footnote{Id.} The ultimate ends are public health, access to nutrition, development, and access to knowledge—even more broadly, public interest and human rights.\footnote{Id. at 925–26, 932.} We cannot value the (private) means higher than the (public) ends.\footnote{Id. at 925.} The shrinking of the public domain poses a threat to new creations and innovation. This difficulty should be addressed by harnessing the flexibilities built within TRIPs.\footnote{Id. at 928–29.} Reading these statements, I am rather encouraged. However, I would have much preferred to hear them when Mr. Lamy was at the beginning of his term as E.U. Trade Commissioner rather than at the end when he had become a candidate for the position of WTO Secretary. I should also confess that at the same I time feel quite apologetic when I pause to think about the disingenuous moves that the European Union from time to time makes in connection with agriculture and textiles while enunciating these lofty ideals. I know there is a contradiction here; but, I also believe that there is no reason to throw the baby away with the bath water.

4. Implementing the General Principles: Antitrust, Development Component and Regime Design Fine-Tuning

It should be noted, going back to the questions I raised at the beginning of this Part, that the general principles must be taken seriously simply because they incorporate what is referred to as a “development component” in connection with measures specifically targeting international transfer of technology. While this may be an important issue, particularly for developing countries, the goal of
preserving access to technological knowledge by subsequent generations of innovators has more to it than the distributional and fairness concerns we generally associate with reference to a “development component” of international trade agreements; indeed, it is about the global economy and its long-term efficiency.

It would seem that the reading I just proposed here of TRIPs general principles allows for ample room to rules aiming to preserve competitive openness in downstream innovation markets. Indeed, as we just noted, Article 7 of TRIPs advocates as its ultimate goal: “the mutual advantage of producers and users of a technological knowledge.” It is to be expected that, on top of the consideration due to the interests of producers of current technology, the interests of those users of the same current technology, who in turn are candidates to become IP producers by generating and making available the next generations of technologies, are given appropriate weight. In this connection, it should be taken into account that these latter interests, while occasionally conflicting with those of incumbent IP holders, can hardly be described as non-IP and may prove essential under the current circumstances to keep the innovation engine working. Because IP protection is not a goal in itself, but a means intended to contribute to the provision and dissemination of technological innovation, the “manner conducive to social and economic welfare” recommended by Article 7 would seem to require a fine balancing between claims to protection by current, “incumbent” IP holders and claims to access to innovation markets by subsequent, “new-comer” generations of IP providers.

So far we have been dealing with goals. Turning our attention to means, or rather to the issue of the choice of means adequate to further the relevant goals, we should note that a crucial question in this connection is whether TRIPs enables the pursuit of these purposes not only through ad hoc and ex post antitrust intervention but also through generalized and ex ante measures. These measures include the option to design the various features of intellectual property rights, such as the access requirement, the scope of protection, or the limitations and exceptions, in such a way to permanently incorporate pro-competitive features.

To counter this latter possibility, it might be argued that TRIPs makes room only for antitrust intervention. Any kind of measure not specifically intended to prevent a restraint of competition, it might be argued, is not TRIPs-compliant. This argument is clearly wrong. Under Article 8(2), Members may also adopt legislation “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, even in the absence of proof of a specific restriction of competition. Indeed, as earlier remarked, resorted to the disjunctive “or” in this provision clarifies that adverse impact on international transfer of technology may be a sufficient basis for legislation controlling IP abuse or dealings. So, the same issue that gave rise to endless discussions when model laws were drafted with a view to implementing the U.N. Set has been solved by a simple stroke of the pen in the TRIPs context.

I submit that TRIPs’ general principles, as understood here, provide a number of ways of advancing competitive concerns including the possibility of incorporating pro-competitive features in the design of IP rights. Generalized ex ante measures to advance pro-competitive concerns in the design of specific IP regimes can clearly be encompassed by the literal meaning of Article 8(2). Under certain conditions, the balancing of competing claims by current IP holders and downstream innovators favored by TRIPs general principles is best achieved by fine-tuning IP regime design rather than by antitrust intervention. Indeed, the former may turn out to be more predictable in its outcome, because it can be adopted ex ante rather than ex post by interested parties. It may also entail a much greater level of legal certainty at the time the initial decision as to investment in innovation is taken than is the case with antitrust proceedings, in which the initiation of a controversy and its ultimate results are to a very large extent unforeseeable. Additionally, it should be considered that regime design fine-tuning would have the advantage of being generalized rather than ad hoc, translating into rules evenly applicable to all firms and business entities that might find themselves in a set of in pre-defined circumstances. This feature again compares well with antitrust intervention in terms of TRIPs’ general principles because it would avoid the recurrent, unfortunate situation whereby a firm subject to antitrust scrutiny is apt to be singled out in ways that may entail the dangers of discriminatory treatment. This risk is not to be lightly dismissed in contexts, as the one considered here, in which antitrust is based on regional or national rules applicable to both national and foreign firms and its enforcement, as we

90. TRIPs Agreement, supra note 1, art. 8(2).
91. See supra Part I.A.
92. A similar point is made by Ullrich. Ullrich, supra note 8, at 406; see also Odman, supra note 11, at 348–49.
93. See Sell, supra note 17, at 166–69.
shall see in more detail later, may turn out to be inappropriately “selective.”

Of course, the kind of modification or adaptation of regime design I described as fine-tuning should not subvert the basic features of the relevant IP protection. Indeed, fine-tuning should be confined to minor, “interstitial” adaptation of features, such as access requirement, scope of protection, exceptions, initial ownership rules or transferability, which make for a finer balancing of the interests at issue without contradicting the basic premises of TRIPs-mandated minimum protection. In this regard, the concept of fine-tuning seems to me the reverse side of the notion of “net outcome,” which I earlier described as TRIPs-mandated and non-negotiable. Minimum standards are not a mandate for absolute uniformity in all Members’ IP laws, because total uniformation in IP protection certainly is not the goal of TRIPs. Rather the core of protection as envisaged by TRIPs should not be curtailed. It is interesting to note that a recent World Trade Organization Panel Report has similarly argued that the good faith principle guiding Members in the exercise of their discretion is enshrined in the “a balance of rights and obligations” language in Article 7.

While the option I described as regime design fine-tuning has these obvious advantages, it has its limitations as well. To begin with, this alternative is open only if and to the extent the mandate of TRIPs-compatibility is respected. To make sure that this is the case, a number of criteria has to be developed. I shall try to work out the details in Part III. Nevertheless, coming back to the issue I raised in the final part of Part I.A.4, it already appears possible at the present stage of the discussion to build on the reading of TRIPs principles here proposed to come to the conclusion that, in deciding whether TRIPs-mandated uniform standards are compromised or not, the interpretation of the relevant provisions should indeed give an appropriate place to TRIPs general principles. In doing so, it is possible to reserve adequate consideration both to the pro-competitive concerns these incorporate and to the claims to access to IP from current users and subsequent generations of innovators as recognized under Article 7 of TRIPs.

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94. See supra Part I.A.4.
95. See Section 211 Panel Report, supra note 59, ¶ 8.57.
96. See supra Part I.A.4.
5. The Constitutional Dimension of TRIPs: From Negative to Positive Integration

As remarked earlier, TRIPs departs from the long tradition whereby international IP conventions confined themselves to imposing on Members only negative obligations, in particular by requiring national treatment of foreigners, and takes the unprecedented step of mandating positive obligations, including most-favored nation treatment and greatly expanding minimum IP protection standards. What are the implications of this new approach for the purpose of determining to what extent TRIPs authorizes IP-interfacing competition rules to consider non-IP interests, including claims to access by current users and future innovators?

One can look at this issue in two ways. By importing a constitutional dimension into international public law, one may make the case that the more extensive and intensive involvement of the international community in shaping uniform IP rules, which hitherto had remained in the preserve of domestic regulators, should be counterbalanced by an expansive reading of the legislative powers retained by Members. It may be also argued that this reading should, in particular, apply at the intersection between IP and competition for reasons that appear well-grounded on the reading of TRIPs’ general principles proposed here. Reference to the neo-federalistic underpinnings of TRIPs might well describe this former approach.

A more complex argument has been developed by international law scholars. According to this latter view, the move from negative to positive integration of Members of the international community is not confined to IP and TRIPs. Indeed, the same expansion has taken place at the macro level. While 1949 GATT was based on negative integration in the form of a ban on discrimination of foreign goods, the 1994 WTO-GATT architecture is based on positive integration. Indeed, in addition to export trade, it also encompasses licensing of IP and foreign direct investment, which is made apparent by the inclusion of

97. See supra Part I.A.
98. Originally, the only uniform minimum standards of protection to be found in international IP conventions were the Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, art. 10bis, U.S.T. 1583, 828 U.N.T.S. 305 [hereinafter Paris Convention] (as last at Stockholm July 14, 1967), and the Berne Convention for the Protection of Literary and Artistic Works, Sept. 9, 1886, arts. 2(5), 5, 6bis, 11bis, 25 U.S.T. 1341, 828 U.N.T.S. 221 (as last revised at Paris on July 24, 1971).
99. See Dinwoodie & Dreyfuss, supra note 8, at 447.
100. See Petersmann, supra note 54, at 29, 33–40.
the GATS and TRIPs components in WTO’s single package. In this perspective, the most-favored nation clause and uniform minimum standards feature of TRIPs are still of paramount importance as a corollary of the larger shift rather than for their specific significance. It is forcefully argued that positive integration cannot remain confined to markets, as the experience of E.U. integration has shown. Rather, it triggers broader claims of political legitimacy that find a reply only on the basis of a fundamental rights dimension. Competition rules, along with the formation of a “broader political constituency” and the establishment of appropriate mechanisms for upholding fundamental human rights, are deemed to be the locus in which such broader claims may find their proper basis.

While I have been a keen reader of Professor Petersmann’s work in the last decades, I must also confess that I am not always sure that I am able to make out exactly what he means. This is certainly due to my limitations. As an IP and corporate lawyer, I certainly am not best situated to grasp all the niceties and implications of international public law scholarship. However, I will propose here a minimalist reading of his argument. Petersmann’s work certainly does make a case for (a) giving an appropriate place to the pro-competitive concerns incorporated in TRIPs, such as the international constitutional dimension at which the WTO compact places freedom of markets and firms engaged in the market process has a constitutive (or is it constitutional?) significance; and for (b) recognizing that WTO framers thought that the best level in which this significance should be preserved is, under the current institutional arrangements and as far as the IP-competition intersection is concerned, the domestic level of Members’ municipal legislation.

Also, scholarship is a cumulative enterprise; thus, I expect that further consideration, particularly by a younger generation of scholars, may lead to the distillation of more clear and precise insights in this admittedly obscure—and may be a bit “Hegelian”—corner of this Article.

101. *Id.* at 26.
II. MEMBERS’ OPTIONS

A. The Menu of TRIPs-Compliant Pro-Competitive Models

1. An Interim Balance

Even if one accepts the interpretive framework just proposed, what sort of pro-competitive inputs fit the TRIPs architecture? The question should be asked, because after so much talk about ends and means, intermediate goals and final goals, and of constitutional dimensions and federalistic underpinnings, one might start to wonder where promotion of competition exactly belongs.

By now, we should be in a position to sketch a tentative reply to this question by combining a few of the earlier findings.

First, we established that in this area TRIPs builds on an architecture based on authorization plus reticence. Therefore, Members should be deemed to enjoy considerable latitude in shaping their laws at the intersection between IP and antitrust. Such latitude fits nicely into the larger picture.

Second, Members’ legislation authorized by TRIPs may no doubt be intended to foster competition for the sake of competition itself under classic antitrust laws, that is, to make sure that markets are kept open and that decentralized price-based market mechanisms may contribute to allocative and productive efficiency. However, TRIPs does not seem to mandate that IP-interfacing competition rules envisage competitive outcomes as their exclusive or main goal. On the contrary, it would appear that Members may enact IP-interfacing competition rules while keeping in mind other concurrent concerns, including the purpose of curbing practices that may have a negative impact on transfer of technology under Articles 7, 8(2), and 40 or restrict access by users and subsequent generations of innovators again under Articles 7 and 8.

Third, I have argued that the reading of the TRIPs’ general principles opens up the possibility of incorporating pro-competitive concerns and giving adequate consideration to claims for access to IP by current users and subsequent generations of innovators. Members may do so by resorting to a variety of measures, including generalized ex

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102. See supra Part I.A.3.
ante rules in the very design of individual IP rights.\textsuperscript{105} I recognize that this last point still needs being fleshed-out because I have not yet tried to develop detailed criteria to deal with the overriding mandate of TRIPs-compliance. Nevertheless, it appears to me that the best way to go about in this kind of task is to look at the specifics of individual issues, as I propose to do shortly in Part III.

By combining these findings, we should now be in a position to perceive the width of the spectrum of choices enabled by TRIPs to Members in connection with the shaping of their laws at the intersection of IP and competition.

2. Varieties of Antitrust: The Benefits of Hindsight

How wide is the spectrum of available choices? In replying to this question, we should start with classic antitrust or competition rules that probably provide a lesson from our own past. Indeed, in the U.S. and E.U. antitrust community in the last two or three decades, there has been a certain amount of convergence on the issue of the purposes of antitrust. On the two sides of the Atlantic, we seem to generally agree that the dual goals of antitrust are allocative and productive efficiency. They both put market mechanisms to the ultimate advantage of consumers, and antitrust, being a remedy to market failure, protects competition rather than competitors.

However, if this is our current position, things have been quite different in the past. I do not want to go into all the various strands that have from time to time found their place in the complex and fascinating history of antitrust. What seems certain to me is that, at earlier times, both American and European antitrust laws have been concerned about the possibility that powerful combinations might, in the words of Justice Peckham, drive “out of business small dealers and worthy men, whose lives have been spent therein.”\textsuperscript{106} On other occasions, and notably at the time of the passage of the Sherman Act\textsuperscript{107} and the introduction of antitrust laws in post-World War II Germany,\textsuperscript{108} it has been the political legitimacy of monopolistic power that has been questioned as incompatible with our democratic forms of government.

\textsuperscript{105} See supra Part I.B.4.
\textsuperscript{106} United States v. Trans-Missouri Freight Ass’n, 166 U.S. 290, 323 (1897).
Moreover, fairness concerns have been recurrently incorporated into antitrust assessments. This is precisely what happened on the American side of the Atlantic when the goal of preserving the Jeffersonian ideal of a sufficient number of (possibly small and local) competitors on the market (notably against the risk of their “foreclosure”) has prevailed. On the other side of the Atlantic, we Europeans have resorted to a similar overstretching of competition laws to accommodate the eirenic vision of a social market economy (soziale Marktwirtschaft) with a strong component of small and medium enterprises (Mittelstandschutz), as advocated by the economist Chancellor Ludwig Erhard at the time of Germany’s post-war economic boom.

Of course, we currently tend to regard these approaches as weak minded, even if noble. However, the best of us have been able to visualize that these very incomplete understandings have proved to be necessary steps in the process that lead us to the present consensus, and that what might appear with today’s lenses as an inconsistency or a weakness did at the time play an important, if transitory role, in the overall arrangement of legal affairs.

Therefore, it seems to me quite possible that features similar to the ones we have in the meantime dismissed as unsatisfactory or even unacceptable might initially crop-up in a number of TRIPs-enabled competition laws. A practice that we, at this stage of our competition laws, might regard as perfectly acceptable and even efficient, such as a tie-in by a firm without market power, might well be considered unfair or restrictive and, therefore, forbidden by emerging countries’ legislation. Harm to a weak competitor, which we might consider of no material impact on competition or even the healthy expulsion from market of the inefficient, may still be seen as objectionable. Scrutiny over the “fairness” of the terms set by a dominant firm may appear appropriate. These rules may appear wrong-headed to us; and they probably are wrong. We should, however, make good use of the benefits of hindsight. Therefore, we should remember that they occasionally have served useful purposes at the time we, on both sides of the Atlantic, adopted them or their equivalents.

More to the point, I believe that there is no legal objection under TRIPs to these measures, which after all belong to the panoply of instruments we have for a long time used under the heading of antitrust

109. Among whom I would like to include an Italian scholar, VINCENZO MELI, RIFIUTO DI CONTRARRE E TUTELA DELLA CONCORRENZA NEL DIRITTO ANTITRUST COMUNITARIO (2003).
or competition law, “provided”—of course—“that they are consistent with the [other] provisions of this Agreement”\(^\text{110}\) (which is a remarkable restriction anyway, as we had a chance to see in the previous Part). This conclusion seems to me even more warranted if we consider that, as just indicated, Article 8(2) of TRIPs goes so far as to allow for legislation intended “to prevent the abuse of intellectual property rights by right holders or the resort to practices which . . . adversely affect the international transfer of technology,”\(^\text{111}\) even in absence of proof of a restriction of competition.

Surely, it is quite possible that some of the measures considered TRIPs-compliant may eventually backfire on the economies of the Members that adopt them. Indeed, licensing by Northern firms to Southern businesses may end up being discouraged rather than promoted by overly restrictive legislation. This simple rule applies across-the-board: to exchange control and profit repatriation restrictions as well as to antitrust intervention aiming to forbid “unfair” contractual arrangements. Just to mention an IP-specific situation, it has been often argued that outlawing clauses that prevent licensees from exporting licensed products either to the country of the licensor or to those of other licensees may in actual practice have an adverse impact on technology flows, thereby inducing a would-be licensor to give up the idea of licensing in the first place.\(^\text{112}\) However, the point I am making here is different. The wisdom of this sort of legislative measures should be seen as an issue of policy; their ultimate economic outcome depends on a matrix of factors among which the size of the market of the country adopting the measure is probably a crucial one.\(^\text{113}\)

I previously argued that technical cooperation under Article 67 of TRIPs extends to the preparation of laws and regulations on the prevention of abuse of intellectual property rights,\(^\text{114}\) including anti-competitive abuses. I would also suggest that Members with antitrust expertise should give independent (and disinterested) advice to help developing and least-

\(^{110}\) TRIPs Agreement, supra note 1, art. 8(2).

\(^{111}\) Id.


\(^{113}\) Data about the correlation of market size, IP protection, and decisions concerning the mode of exploitation of technology (exports of goods, licensing, foreign direct investment) is accumulating. For a preliminary review, see Reichman & Maskus, Globalization, supra note 7, at 287–91.

\(^{114}\) See supra Part I.A.
developed Members distinguish measures that are economically expedient under their specific domestic circumstances from those that are likely to backfire. But this does not in any way amount to saying that inappropriate measures would thereby be ipso facto in breach of TRIPs.

However, there are cases in which a measure adopted by a Member may be in breach of TRIPs. And this is case, as we just saw, when they are not consistent with “the provisions of this Agreement” under Articles 8(1), 8(2) and 40(2). Otherwise, Members do enjoy wide discretion in framing rules at the intersection between IP and competition.

B. Effectiveness Issues

Will Members, in fact, make use of such a discretion? This is a factual question that will find a satisfactory reply only through evidence of future actual practice. However, I raise it here because it would appear to me that we are already in a position to make at least an educated guess as to the likelihood of future developments in this area.

1. Dissemination-Oriented Competition Rules and Developing Countries

In this connection, I would not make too much of the fact that an ever-growing number of member countries have adopted rules that can be loosely described as competition, antimonopolistic or antitrust laws.\footnote{Monti, supra note 36, at 81 (reporting that in 2001, eighty WTO Members had enacted one form or other of antitrust laws).} This is to a large extent an irrelevancy, because a very large percentage of these laws has remained on the books only, actual implementation being either occasional or even non-existent.\footnote{See Joel Klein, Expanding our Web of Bilateral Agreements, in COMPETITION POLICY IN THE GLOBAL TRADING SYSTEM, supra note 35, at 335, 338–39.}

What are the reasons for this kind of failure, which is particularly widespread among developing countries? The fact is that emerging economies do have a number of reasons to be cautious in embracing antitrust. Their political and academic elites tend to see antitrust as a body of rules originating from developed nations and hardly adaptable to their widely different economic and social environments, in which State intervention and action by public enterprises tends to be extensive.\footnote{See AJIT SINGH & RAHUL DHUMALE, COMPETITION POLICY, DEVELOPMENT
appropriate timing for implementing competition policy should be selected on the basis of the stage of economic development in which each economy finds itself. In earlier phases of economic development, what is labeled as dynamic efficiency, may be perceived as more important than static efficiency. Accordingly, the goal of keeping prices down and increasing consumers’ choice may be deemed to have a lower priority than investment and economic growth. It is argued that, if developing countries were to adopt antitrust, at a minimum they should incorporate “asymmetrical” rules in favor of what are usually called infant industries. In a similar vein, it is suggested—that not always quite as openly as in the past—that competition rules for developing countries should leave open the possibility for the kind of government intervention in the market place that, while disparagingly described by free-marketeers as industrial policy or mercantilism, has sometimes proved exceedingly successful, as evidenced by the high rate of economic growth of the countries usually described as Asian Tigers (Taiwan, Hong Kong and Singapore).

Maybe we should examine the reasons that explain this attitude of caution, if not of suspicion, usually experienced by developing countries in connection with antitrust. If we do this, we might perceive what lies at the heart of this quite widespread attitude. Antitrust is liable to turn out to be a kind of Trojan horse of multinational enterprises, because the nets of local regulations and reciprocal


118. For this kind of argument, see Kerrin M. Vautier, Competition Policy, the Pacific Economic Cooperation Council and the WTO, in DEVELOPING COUNTRIES IN THE WORLD TRADING SYSTEM: THE URUGUAY ROUND AND BEYOND 131, 143 (Ramesh Adhikari & Prema-chandra Athukorala eds., 2002).

119. See SINGH & DHUMALE, supra note 117, at 133–34; see also Jenny, supra note 35, at 312 (discussing the issues that surfaced several times during the meetings held by the Working Group on the Interaction Between Trade and Competition Policy).

120. For a sympathetic discussion of this argument, see Jenny, supra note 35, at 308–09.

121. For a reference to the economic choices of Hong Kong and Singapore, see Vautier, supra note 118, 133–34. For discussion specific to the desire of developing countries to retain flexibility in the setting up crisis and rationalization cartels, see Clifford A. Jones & Mitsuo Matsushita, Global Antitrust in the Millennium Round: The Ways Forward, in COMPETITION POLICY IN THE GLOBAL TRADING SYSTEM, supra note 35, at 397, 405–406.

122. I think it is more accurate to refer to caution than suspiciousness or reluctance towards antitrust in this context, because in recent decades on a number of occasions developing countries seem to have shown interest and even entertained hopes in the possibilities of development-friendly uses of antitrust. In this connection, and in a political sciences perspective, see SELL, supra note 17, at 175–216.
understandings between firms that knit together domestic businesses and helped them to keep afloat on the market risk to be challenged and ultimately displaced by strict enforcement of antitrust and its precepts of market access and parity of competitive conditions. Indeed, it has been forcefully argued that what is described as a level playing field in actual practice is “tilted in favour of multinationals;” and this point, made by writers clearly engaged in favor of developing countries,123 is embraced also by much more detached scholars.124 Therefore, it is hardly surprising that, among the many grounds of failure of the still recent Cancún summit, we should find a total refusal by developing countries to include in the agenda the issue of international antitrust.125

However, it should be noted that none of the reasons of caution, reluctance or resistance towards antitrust enforcement apply when considering the specific field that is located at the intersection between IP and competition. This is so for a very simple reason: the promotion of competition leads to a one-way street. In fact, IP assets typically belong to holders who are not nationals of developing countries, as evidenced by all available statistics and confirmed by the history of TRIPS negotiations I earlier referred to above. Therefore, adopting competition rules at the intersection with IP, possibly in combination with measures specifically targeting restrictions in international transfers of technology, seems to be apt to bring to developing countries’ economies many of the predictable benefits associated with competition policies without incurring most of the perceived risks.

Coming back to the question that opened this Part, the reply seems to be in the affirmative, at least in part. It seems likely that a number of Members, including developing member countries, will indeed have incentives to make use of the discretion accorded to them by TRIPS at the intersection of IP and antitrust. This seems even more likely, considering the number of available choices. When the menu is ample and varied,126 it becomes easier to find an option that is perceived as palatable. And it seems that this forecast can be corroborated by pointing to the writings of a younger generation of developing countries’ scholars that are advocating a well-tempered use of competition law at the intersection with IP and preparing a number of carefully calibrated

123. SINGH & DHUMALE, supra note 117, at 128.
124. BRAITHWAITE & DRAHOS, supra note 17, at 187.
125. See Stewart, supra note 48.
126. See supra Part II.A.2.
recommendations for their policymakers precisely in this field.127

2. Innovation-Oriented Competition Rules in Global Innovation Markets

There is a second, separate reason for questioning whether pro-competitive inputs may have a real impact over the current trends in IP. The argument has been raised in connection with cutting-edge, high-innovation technologies, rather than with developing countries as in the previous paragraph. In this context, it has been noted that TRIPS-enabled competition rules, even if they were to be enacted and enforced, may at a maximum play a limited role in countering IP overprotection, because they follow a model of competition policy that has in the meantime become obsolete.128 This is so, it is argued, because classic antitrust deals with products’ markets and with post-innovation technology transfers from advanced to less-advanced industries and firms;129 however, these areas have become marginal as the main focus of IP protection has shifted from “tangible material embodiments”130—such as mechanical devices, chemical and pharmaceutical products—to new varieties of subject matter “in their disembodied state” (such as software and DNA code).131 While dissemination-oriented competition law has gradually become less relevant, tangible product markets recede, and innovation markets become crucial, the new innovation-oriented competition policy that has emerged in the United States and in the European Union is perceived as increasingly unequal to the original antitrust mission of preserving open and competitive markets. More recent competition laws, when dealing with novel forms of disembodied subject matter, are seen as engaging in a race of laxitude, in which the dominant criterion becomes the measurement of some notion of innovation efficiency rather than of the restrictive impact of

127. See Odman, supra note 11; see also Stewart, supra note 48. For additional references, see Pacón, supra note 49, at 348–56. However, it appears noteworthy that the younger generation of developing countries’ scholars also include voices, such as Ignacio De Leon, The Dilemma of Regulating International Competition under the WTO System, 18 ECLR 162 (1997) (presenting a closely argued case against the soundness of the theoretical basis of antitrust by reopening the controversy—which seemed closed half a century ago—on the very justiciability of this area of law).

128. See Ullrich, supra note 8, at 421. For a similar analysis, see supra text accompanying notes 7–8.

129. Ullrich, supra note 8, at 420.

130. See id. at 416.

131. See id.
current arrangements.\textsuperscript{132}

Once again, I am neither totally sure that I fully understand all of this nor that I totally agree with what I understand. So, I believe that I have already stated clearly enough the reasons why I do not see TRIPs-enabled competition rules as mainly focusing on two-party licensing, even though I can see the danger to new-comer Members in the field of antitrust. For instance, developing countries might end up giving too much weight to issues that may have become less crucial, such as the control of clauses perceived as restrictive in technology transfer and licensing.\textsuperscript{133}

Also, I agree that, by moving upstream IP protection, developed countries, particularly the United States and the European Union, may have made it more difficult to preserve the delicate balance between incentives to innovation and competitive openness. This trend may threaten both the long-term efficiency of the global economy and, in part, the chances of those developing countries that strive, sometimes with remarkable success, to stay at the cutting-edge of innovation. Indeed, it is the perception of precisely these developments that has supplied the starting point of this Article.

However, it also seems that this challenge may be met in TRIPs-compliant ways both by developed and developing Members on the basis of the prior findings. In general terms, TRIPs allows for a wide menu of pro-competitive options. More specifically, these include a spectrum of options consisting not only of traditional ex post antitrust intervention and measures specifically targeting international transfer of technology, but also of the kind of ex ante pro-competitive features in the design of individual IP rights that this Article earlier described as regime fine-tuning. The emergence of this novel form of norm-making at the intersection of IP and competition should hardly be surprising if it is true that novel challenges tend to generate fresh opportunities.

III. TESTING THE HYPOTHESIS: FIVE EASY PIECES

It is sometimes said that the proof of the pudding is in the eating. So, it may be advisable at this juncture to turn to the analysis of a few specific examples of areas in which IP protection and competitive concerns meet to identify with the necessary precision the options

\textsuperscript{132} See id. at 421–26. There are E.U. group innovation incentives in areas such as pooling, cross-licensing, joint research and development, which parallel similar developments in the United States. See id. at 418–20.

\textsuperscript{133} See supra Part I.A.1.
available to Members and to assess their TRIPs-compatibility. As to the sequence, this Article will initially look at measures specifically targeting restrictions in the international transfer of technology, then the classical antitrust intervention, and finally the kind of generalized ex ante measures described above as regime design fine-tuning.

A. Measures Specifically Targeting Restrictive Behavior in International Transfer of Technology

1. Ex post Intervention in International Technology Transfer

We may as well start with an easy one. As earlier indicated, there is no doubt that Members may adopt appropriate measures to control or forbid licensing practices or unilateral behavior concerning IP that may adversely affect international trade under Articles 8(2) and 40(2) of TRIPs. It is also without question that such measures, whether concerning bilateral or unilateral behavior, may be adopted even in the absence of proof that they involve a specific restriction of competition, such as would be required under classical antitrust rules. Therefore, to establish TRIPs-compatibility of a given provision, it is not required that the behavior subject to control or prohibition is prejudicial to competition at large rather than to a specific competitor. This is not so simply because, as we established above, TRIPs leaves room to a wide spectrum of varieties of antitrust. Rather a threshold consideration is controlling here: establishing the anti-competitive character of the controlled or forbidden behavior is not a requirement under Article 8(2).

However, it has been persuasively argued that the competition-restrictive nature of a technology transfer clause or agreement is a necessary connecting factor under Article 40(2), even though it is not a factor determining the outcome of the control. This is most probably so; however, it does not seem to rebut the point previously made. Indeed, as noted above in Part I.A.1, Article 8(2) covers both unilateral and bilateral behavior because it refers to the notion of “practices.”

134. As was probably the case in connection with model laws under the U.N. Set. See SELL, supra note 17, 164–68.
135. An example of the latter might be a clause requiring a licensee to purchase quality-sensitive inputs exclusively from a licensor not possessing market power. An example of the former would be a clause or practice (e.g., a ban on competition in research and development) undermining licensee’s technological independence.
136. See supra Part II.A.2.
137. See Ullrich, supra note 8, at 406 n.21.
Thus, a provision that may fail to be TRIPs-compliant under Article 40(2)—because it lacks the required connecting factor—is still apt to be found legitimate under Article 8(2).

In this connection, it should be noted that so far we have been talking about Members’ provisions that forbid or control behavior by private parties. The corresponding rules are negative, in that they tell private parties what they are not supposed to do. Should the same private parties fail to comply with the rule, the Member’s legal system may ex post react on the basis of an ad hoc judicial or administrative decision, the effects of which are limited to that specific situation.

2. Local Working Requirements

Now, we should look at the question of whether Members are permitted under TRIPs to structure their patent laws in such a way as to insert a requirement of local working. If so, the holder of a patent granted by the Member’s legal system has what prima facie would appear as an affirmative duty to exploit the patent in the country of the grant pursuant to the provision of Article 5(A) of the Paris Convention and is subject to compulsory licensing under Article 5(A)(2) and (4) thereof in the event he or she fails to work it for a given number of consecutive years from the date of the filing or the grant.

This issue is understandably hotly debated. If failure to work were to trigger liability to compulsory licensing, the corresponding provision would translate into a powerful incentive for patent holders to engage in local working, rather than in manufacturing elsewhere and importing. In turn, this would encourage patentees to transfer technology from those more advanced economies in which they are likely to be headquartered to the country imposing the requirement. Such a rule would accordingly not only be perceived as making a significant contribution towards the technological development of the Member of the grant but also as providing a formidable means of coercion over patentees.

It might be argued that the rule would be covered, as to its TRIPs-compliance, by both sections of Article 8. Article 8(1) provides

in part that “Members may, in formulating or amending their laws and regulations, adopt measures necessary . . . to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided such measures are consistent with the provisions of this Agreement.”

Thus, it may be argued that local working may be mandated by Members at least in “sectors of vital importance to their socio-economic and technological development.” In turn, Article 8(2) provides that “appropriate measures, provided that they are consistent with the provisions of this Agreement, may be needed to prevent . . . the resort to practices which . . . adversely affect the international transfer of technology.”

This latter provision might be read as justifying local working requirements across-the-board, particularly if we subscribe to the view that, under the notion of “practices which . . . adversely affect the international transfer of technology,” we can understand not only unilateral or bilateral behavior by patent holders vis-à-vis actual or potential business partners, as we have assumed so far, but also a purely unilateral behavior, such as manufacturing abroad and importing into the Member.

This approach might be supported by reference to the provision of Article 5A of the Paris Convention, because paragraph 2 of this provision, which was incorporated by reference in TRIPs through Article 2(1), considers “failure to work” a patent as a mode of exercise of the right that may be deemed abusive and, thus, subject to the remedy of compulsory licensing.

On the other hand, this conclusion may be challenged by referring to the text of Article 27(1) of TRIPs, which quite adamantly states that “patents shall be available and patent rights enjoyable without discrimination as to . . . the field of technology and whether products are imported or locally produced.”

This contrary argument is supported quite strongly by current principles of purposive interpretation. The WTO/GATT international economic context is clearly based on the idea that the free flow of factors should be liberalized so that the law of comparative advantages may foster the optimal allocation of resources. Thus, it is very difficult to conceive that Members’ legislation may still consider abusive decisions as to the

139. TRIPs Agreement, supra note 1, art. 8(1).
140. Id. art. 8(2).
141. See Correa, supra note 66, at 490. The opposite view is advanced by Straus, supra note 138, at 204–05.
142. TRIPs Agreement, supra note 1, art. 27(1) (emphasis added).
location in which patented goods are to be manufactured, because this kind of choice should be in principle left to the decentralized decisions of economic actors and sheltered from regulatory coercion. Thus, it does not seem to me that it could plausibly be argued that Article 27(1) of TRIPs constitutes the *lex generalis* on patentable subject matter, while Article 5A of Paris Convention contains the *lex specialis* on the issue of local working. Indeed, if Article 5A still were understood as implying that import of patented goods manufactured abroad is not perfectly equivalent to local manufacture of the same goods, the municipal legislation enacted under the old Paris Convention provision would run counter the prohibition of “other measures” apt to restrict the free flow of trade contained in Article XI of GATT.

Therefore, it appears that the mandate of TRIPs-consistency does not allow that the rule of Article 27(1) regarding the equivalence of imports to local manufacturing to be undermined by an across-the-board compulsory licensing regime triggered by failure to locally work the patent. Neither Article 8(2) nor Article 31 of TRIPs could possibly justify such a result, which would amount to a total negation of the principle of equivalence. This outcome is corroborated even if we consider TRIPs general principles: the development component can be brought in to complement and fine-tune core IP protection, but not to subvert it altogether.

On an earlier occasion, I have suggested that more specific and limited measures might still be warranted under Article 8(1). By reading this latter provision in the light of the general principles-based authorization to take into account the development component in IP matters and particularly in the light of TRIPs recitals 5 and 6, it might be possible to argue that Member legislation providing for compulsory licensing in specific sectors, such as biotechnology, may be TRIPs-compatible. More specifically, biodiversity-provider Members might consider introducing a rule whereby holders of patents granted under the legal system of that Member and based on locally obtained biodiversity are required to locally work the patent and, in doing so, to give preference to local inputs. Failure to do so would leave them

143. See Ullrich, supra note 8, at 411 n.45.
144. See Cottier, supra note 138, at 408.
subject to compulsory licensing.\textsuperscript{147}

Also, this opinion might nevertheless be questioned by asking whether this sort of measure would discriminate as to fields of technology in a manner contrary to Article 27(1). Article 27(1) states that “patents shall be available and patent rights enjoyable without discrimination as to . . . the field of technology.”\textsuperscript{148} It may be conceded that the envisaged measure would entail explicitly different treatment for the specific sector, which is usually referred to as de jure discrimination.\textsuperscript{149} However, this assessment may not be conclusive, because the extent to which the prohibition of technological discrimination under Article 27(1) limits the ability of Members to target certain technological fields in dealing with the important national public policies referred to in Article 8(1) requires clarification. Indeed, the fact that some sectors are singled out as of “vital importance” for national policies under Article 8(1) by definition implies that the corresponding measure operates selectively rather than across-the-board. Thus, I suggest that under a TRIPs general principles-based interpretation, Article 27(1) may not altogether negate Article 8(1), and vice versa. While Article 27(1) belongs to the core of patent protection and cannot be subverted by local working measures applying across-the-board, the converse also applies: if the development component expressly authorized by TRIPs is not to become altogether meaningless, then the general rule under Article 27(1) may be subject to the explicit derogation under Article 8(1) if and to the extent the important national policies indicated therein so dictate.\textsuperscript{150}

If this is the case, then a local working requirement confined to a specific sector, such as biotechnological inventions based on local biodiversity, should be deemed TRIPs-compatible. The conclusion that

\textsuperscript{147} For a full treatment of this issue, see Ghidini, supra note 138, at 45–46. On preference for local content, see also Odman, supra note 11, at 349.

\textsuperscript{148} TRIPs Agreement, supra note 1, art. 27(1) (emphasis added).


\textsuperscript{150} For a thorough discussion of this issue, see Dinwoodie & Dreyfuss, supra note 8, at 434–36. See Panel Report, European Communities—Protection of Trademarks and Geographical Indications for Agricultural Products and Foodstuffs, ¶ 7.210, WT/DS174/R (Mar. 15, 2005) [hereinafter Panel Report, European Communities] (stating that “many measures [under Article 8(1)] to attain those public policy objectives . . . do not require an exception under the TRIPs Agreement”). However, it would appear that this opinion, expressed obiter, does not contradict the discussion in the text, because it does not rule out that such measures may have an impact on the extent of IP exclusivity. On the different question of the application of the antidiscrimination mandate to Article 30 TRIPs exceptions, see infra Part III.C.1.
“Art. 27 does not prohibit bona fide exceptions to deal with problems that may exist only in certain product areas”\(^{151}\) has been reached under the general provision dealing with exceptions to patent rights dictated by Article 30 of TRIPs. The same principle should apply \textit{a fortiori} under the sector-specific powers retained by Members under Article 8(1). To establish whether a specific rule, as sketched above, is a bona fide exception, subsequent practice of Members under Article 32 of the Vienna Convention on the Law of Treaties should be considered.\(^{152}\) In this connection, reference should be made to Articles 1, 8(j), 16 and 19 of the Rio de Janeiro Convention on Biological Diversity of June 5, 1992.\(^{153}\) The prohibition would apply, however, in the event the technological specificity translates into a violation of the overriding mandate of national treatment under Article 3, because a general principles-based interpretation of TRIPs may not conceivably conflict with this overarching norm of international IP.\(^{154}\)

What can one make out of this discussion? The careful reader who has been following may have been misled into believing that, by referring to the admissibility of a local working requirement, I intended to reach the promised land of ex ante generalized rules and to contrast their operation to ex post and ad hoc intervention through measures targeting restrictions in international transfer of technology discussed in the previous paragraph. The difficulty with this is that the distinction between ex ante rules and ex post measures is in some way germane to the distinction between regulation and antitrust intervention. It has been said that “unlike antitrust policies, which tell businesses what not

\(^{151}\) See Panel Report, \textit{Canada, supra} note 149, ¶ 7.92.

\(^{152}\) Article 32 of the Vienna Convention forms part of the “customary rules of interpretation of public international law” within the meaning of Article 3(2) of the DSU. See DSU, \textit{supra} note 45, art. 3(2).


\(^{154}\) An additional difficulty arises when we address the question of remedies to failure to locally work a patent. Should the remedy take the form of liability to compulsory licensing, as assumed throughout this section, then one would have to come to terms with the idea that the provision dealing with compulsory licensing, Article 31, is mandatory and, therefore, does not allow for any difference in the technical field of its application. See Panel Report, \textit{Canada, supra} note 149, ¶ 7.90. There are reasons to doubt that this opinion, even if authoritatively endorsed by a panel decision, is persuasive, because Article 31 has to be read jointly with the other provisions of TRIPs, including Article 8(1). Remedial action, to which subjection to compulsory licensing would amount to, is normally believed to be left to Members’ discretion more than substantive IP provisions. Even those who subscribe to the stricter opinion should then consider whether other remedies, such as a bar on exercising patent rights (as in patent misuse cases), would be TRIPs-compliant.
to do, regulation tells businesses what to do and how to price products. Moreover, the distinction between affirmative and negative, between order and prohibition, is not always that clear-cut, as shown in the case of prohibition of refusals to deal on dominant or monopolistic firms, which may indeed be construed also as an affirmative duty to negotiate. Looking carefully at local working requirements, one will find a similar ambiguity. The requirement has an affirmative side to it: it mandates patentees to manufacture locally. But what happens in the event the patentee fails to do so? The remedy, compulsory licensing, is conceptualized as a consequence of failure to locally work so that we do not know exactly whether we are dealing here with an ex ante rule or an ex post measure. To link with the analysis proposed earlier, we should probably focus on a separate feature by asking whether the legal consequence envisaged by the applicable law is generalized or ad hoc. Here, the operational question is more straightforward. Are we talking about a self-enforcing feature that is automatic in its legal consequences and does not require for its actual implementation a specific intervention by a court or another decision-making body? Or are we talking about a rule that becomes effective only after a decision by the competent authority? In the former case, we are talking about a generalized rule; the latter is ad hoc intervention.

In this latter perspective, the place of local working requirements in international intellectual property is relatively clear. They may possibly be considered a measure specifically targeting restrictions in international technology transfer by mandating local working. They also provide an incentive to the flow of technology in the jurisdiction and a correlative disincentive to its restriction. But, this is only a matter of linguistic choice without normative consequences. What is normatively relevant here is that the remedy in case of failure to meet the mandate is usually conceptualized in terms of liability to compulsory licensing, and that this form of remedial action is not automatic. Rather, it may not be administered by the legal system of the relevant jurisdiction without a specific, ad hoc intervention by a pre-determined authority under Articles 31(a), 31(i) and 31(j) of TRIPs. Indeed, to

156. See supra Part I.B.4.
157. For a discussion about whether this remedy is TRIPs-compliant and on the available alternatives, see supra note 154.
come across pure ex ante, generalized rules shall wait until we come to what I earlier described as regime design fine-tuning.

B. Antitrust Intervention

1. Refusal to Deal

People are familiar with thinking of refusal to deal as an antitrust issue. But, of course, there are circumstances under which we might as well visualize an IP-related refusal to deal as a practice adversely affecting the international transfer of technology.

It has been argued that Members' laws may provide for a remedy, be it compulsory licensing or some kind of antitrust-specific relief in the event an IP holder refuses to license his technology “on reasonable commercial terms and conditions.” I disagree; this kind of rule would not be TRIPs-compliant.

It is certain we cannot find a legal basis for this argument in Article 31(b). This provision refers to “reasonable commercial terms and conditions;” but, it does so for an entirely different purpose, that is, to clarify that no compulsory license may be granted if the would-be licensee has failed to make efforts to obtain a voluntary license “on reasonable commercial terms and conditions.”

Even from a competition law perspective, subsection (k) of Article 31, while dispensing from the requirement of prior bona fide negotiations under subsection (b), requires that a specific “anti-competitive practice” is established on the basis of an individualized judicial or administrative decision.

I submit that the anti-competitive character of the practice cannot be found in the refusal to deal per se but must consist in separate restrictive features in the relevant behavior of the IP holder. This additional requirement is both a consequence of the wording of Article 8(2) of TRIPs, which envisages the prevention of “abuse of intellectual property rights,” and a necessary implication of the mandate of TRIPs-compliance, specifically iterated in this same provision. Indeed, under TRIPs, IP rights are conceived as exclusive property rights that are protected under a most emphatic enunciation of property rules. Such

158. Correa, supra note 66, at 490.

159. In the notion explored in its general dimension by the classical work by Guido Calabresi & A. Douglas Melamed, Property Rules, Liability Rules and Inalienability: One View of the Cathedral, 85 HARV. L. REV. 1089, 1124–25 (1972), and developed in the IP field by Robert P. Merges, Of Property Rules, Coase, and Intellectual Property, 94 COLUM. L. REV.
an exclusivity, by its very definition, implies that the holder has the dual prerogatives of authorizing third parties to use the IP and withholding such an authorization.

Of course, we may question the wisdom of this arrangement. The argument whereby property rules are an efficient initial entitlement that not only provide an incentive to supply scarce public goods but also open up the avenue to value maximizing voluntary exchanges is based on a number of assumptions. These assumptions quite frequently do not materialize in connection with novel forms of technological innovation, as it is eloquently proved by inefficient developments in the areas of biotechnology and digital innovation. 160 I certainly share these views and accordingly support the expansion of liability rules in a number of areas of IP. Nevertheless, as a matter of interpretation of the law as it stands, I also believe that we must acknowledge that TRIPs conceives of IP rights as unequivocally protected under a black letter property rule, that is, an entitlement that in European parlance is both absolute erga omnes (protected against all the world) and in rem.

Accordingly, refusal to deal in IP is a mode of exercise of the right that is expressly safeguarded by TRIPs. Therefore, in the absence of additional and separate anti-competitive elements, Members may not consider a refusal to deal abusive and outlaw it on competition law grounds or any other grounds. 161

It would appear that this conclusion may not be questioned by invoking a general principles-based approach. 162 Indeed, neither incorporation of pro-competitive inputs nor consideration of non-IP interests may subvert the fundamental choice of TRIPs to protect IP under property rules. Neither Article 8(2) nor the other provisions listed above in Part I.A.1 authorize Members to transform property rules into liability rules by resorting to the kind of ad hoc, ex post

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160. See James E. Krier & Stewart J. Schwab, Property Rules and Liability Rules: The Cathedral in Another Light, 70 N.Y.U. L. REV. 440, 450–55 (1995) (noting that the theory favoring property rules builds on the assumption that (1) transaction costs of market exchange are low and (2) the candidates to the exchange are few, ideally just two, in such a way that problems associated with strategic behavior (hold-outs, free riding) are minimized or, even better, altogether avoided). Similar points had originally made by Calabresi & Melamed, supra note 159, at 1125, 1127.

161. See also Ullrich, supra note 8, at 410–11.

162. But the conclusion proposed in the text is far from settled. On the various positions, see Dwyer, supra note 49, at 474–75, 535–36.
measure discussed here. Similarly, even after having made the point that a whole gamut of antitrust laws is TRIPs-compatible, one cannot escape the conclusion that none of them can justify a per se prohibition of a refusal to deal in IP. 163

2. Is IP an Essential Facility?

But then, what are the separate anti-competitive elements that would make a prohibition of a refusal to deal in IP TRIPs-compliant? This depends very much on which of the many acceptable varieties of antitrust comes into play. The answers may vary greatly, depending on the fundamental features of each legal system.

So, European competition law forbids refusal to deal only to the extent that (1) there is a position of dominance in the market for which the IP right gives protection in the first place, (2) the refusal has the effect of preventing any competition in a new downstream market, and (3) the refusal itself is not otherwise justified. 164

As far as TRIPs is concerned, the antitrust prohibition of a refusal to deal in IP would appear to require, at a minimum, the finding of an element of market power in the IP holder based on economic evidence other than the legal monopoly granted by IP protection. Indeed, it is well-settled that, while IP exclusive rights by definition give their holders legal monopoly over the protected creation, their position, from an economic standpoint, may well be subject to competition from one or more substitutes. This is a most common occurrence, as shown by the fact that the relevant legal systems usually do not even institute a prima facie presumption that legal monopoly also entails economic market power. 165 Therefore, if a Member’s antitrust laws forbade a refusal to deal in IP on the sole basis of the legal monopoly granted by IP, even in the absence of a finding of economic market power, such a rule would once again transform property rule protected IP into entitlements protected under a liability rule and, therefore, turn out to be substantially equivalent to the one we found incompatible with TRIPs in the previous paragraph. 166

163. See supra Part II.A.2.


166. However, the opposite view is expressed by Ullrich, supra note 8, at 407 n.24.
In addition to a finding of economic dominance, is there a behavioral element required by TRIPs before a refusal to deal in IP may be forbidden by Members’ antitrust laws? Probably so, unless one is prepared to argue that IP held by firms with market power may be different from all other IP in that the former is protected under a liability rule while the latter under a property rule. Such a proposition would seem to run directly counter to TRIPs-mandated minimum uniform standards of IP protection and would also be incompatible with the wording of Article 8(2), which specifically allows for measures intended to prevent “abuse” of IP.  

If this may appear to be a strict rule, then we should consider that this additional behavioral element may be satisfied under a quite large number of different options. In the European Union, the behavioral component is found in the presence of an abuse of dominant position that is triggered when the refusal to deal by the IP holder amounts to an exercise of exclusionary power in connection with a separate, downstream market for which the IP asset is a necessary input. In the United States, a finding of leverage into downstream markets or other anti-competitive behavior is required by case law. These two formulas might be further fleshed out by suggesting the appropriateness of antitrust scrutiny in standards-dominated markets or in situations in which a sector-specific IP is used to obtain disproportionate leverage in vertical or complementary markets.

However, I would very much hesitate before concluding that these approaches identify the outward boundaries of admissibility of antitrust intervention in this context. Indeed, earlier it was noted that the spectrum of TRIPs-compliant antitrust choices is wide; thus, I suggested

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167. One way to read the position taken by Ullrich is that TRIPs allows for rules concerning abuse even in absence of (absolute or relative) market power. Ullrich, supra note 8, at 407 n.24. This position would indeed escape the objection I raised earlier (and might well be compatible with the position I developed on the varieties of antitrust supra Part II.A.2).

168. See IMS Health, 2004 E.C.R. at I-5039. For a thoughtful analysis of the prior line of cases in this are, see MELI, supra note 109, at 106–23, 161–63, 203–42.


that even different assessment criteria might turn out to be acceptable in this perspective. Then, would a “fairness” standard be acceptable in this area? Probably, if one considers that fairness concerns have traditionally been part and parcel of what we initially conceived as antitrust goals, even though this approach ceased to be fashionable on our shores maybe thirty or even forty years ago. And, this affirmative conclusion should be reinforced if we take into account, as we should, that a general principles-based approach to assess TRIPs-compatibility is also supposed to incorporate into the analysis non-IP interests, including a development component that may be far from irrelevant when the issue of access to prior technology is at stake.

Again, this is not to say that what is TRIPs-compatible is also appropriate and well-advised. Far from it. Indeed, there are several difficulties that systematically arise any time antitrust scrutiny is applied to the decision by an IP holder not to make his asset available to interested third parties. First, antitrust is, as we earlier saw, a form of ex post and ad hoc measure. It is enforced on a case-by-case basis by a court or an administrative agency. While a regulatory agency may set in advance a schedule of interconnection fees for the use of an essential facility, such as a network, and do so on a principled basis that may apply to a large number of different situations, antitrust-mandated access to an IP asset is bound to be the outcome of a quite different exercise, which is rooted in a two-party and adversarial context rather than a regulatory context. This may be indispensable in some very specific cases; however, it hardly makes for consistent and predictable results.

Second, in the present legal environment, antitrust is either national or regional, rather than international. IP assets subject to antitrust scrutiny may be—or, rather, tend quite often to be—held by firms that are nationals of a legal system that is different from the one to which the relevant antitrust authority belongs. Thus, lack of predictability and inconsistency over time may translate in international, even “political”


173. Now and then, the idea emerges that resorting to the patent misuse doctrine may yield better results. See Merges, supra note 171, § 3.2.1. I agree, as the doctrine, implying the lesser remedy of unenforceability of the IP rights, rather than full antitrust remedies, does not require the kind of fact-intensive finding that is necessary for antitrust purposes. I would also suggest carefully considering proposals to extend the misuse doctrine to copyright (following the proposal by Chip Patterson, Copyright Misuse and Modified Copyleft: New Solutions to the Challenges of Internet Standardization, 98 MICH. L. REV. 1351 (2000)) and, especially, its adoption by European courts.
tensions.

In such a universe, identifying the additional behavioral component by reference to fairness standards that are vague, open-ended, and accordingly open to second-guessing of discriminatory motives may exacerbate these difficulties. But it would appear that this risk makes the standard unadvisable, rather than clearly TRIPs-incompatible.

Similar conclusions may be reached in assessing the feasibility of applying what is generally termed essential facilities doctrine (EFD) to issues of access to IP. EFD contemplates the possibility of granting competitors access to a resource that is unique and cannot be duplicated by enterprises in a market position comparable to the holder of the facility. This possibility emerges when such access is indispensable for competitors to operate in separate markets located downstream from the resource itself. If this resource is an IP right, one is faced with the same difficulties we encountered in connection with an outright refusal to deal. This difficulty remains even in the cases in which all the requirements for antitrust intervention are met. Because the holder is found to have market power and to have engaged in the kind of behavior that is deemed abusive, while TRIPs-compliance may be taken for granted, the difficulty still remains in that the same access-granting that is the everyday job of a regulatory body may turn out to be a nightmare for an antitrust authority.

C. Regime Design Fine-Tuning

The above discussion should lead us to a final dimension. So far, it has been possible to test, with specific reference to measures specifically targeting restrictive behavior in international technology transfer and to antitrust intervention, the choices available to Members incorporating pro-competitive features into their IP legislation in ways that are TRIPs-compliant.

We have seen that the options, even if not unlimited, are quite

174. See Joined Cases C-241 & 242/91P, Radio Telefis Eireann & Indep. Television Publ'n Ltd. v. EC Comm'n of the European Cmty., 1995 E.C.R. I-00743. The test appears more restrictive in the United States. See David L. Aldridge Co. v. Microsoft Corp., 995 F. Supp. 728, 753 (S.D. Tex. 1998) (holding that “a facility is essential under the antitrust laws only when it is vital to both the plaintiff’s individual competitive viability and the viability of the market in general” (emphasis added)).

175. One of the issues that is to be faced in this connection by antitrust authorities is whether the remedy to refusal to deal and failure to give access to an essential facility may consist in the imposition of an obligation to supply advance information on the IP holder in the light of Article 39 of TRIPs. Ricolfi, supra note 146, at 171–72.
extensive. However, we have also seen that a legislative exercise bent on incorporating pro-competitive features through these two sorts of measures is apt to face a number of difficulties that go beyond TRIPs-compliance. On a number of occasions, we have come across the shortcomings that usually are associated with ex post, ad hoc intervention typical of antitrust and measures specifically targeting restrictive behavior in international technology transfer. Earlier, we had also seen that there seems to be more general reasons why traditional antitrust law faces unprecedented difficulties in dealing with the challenges posed by novel forms of IP protection.\footnote{176}{See supra Part II.B.2.}

Now, the time has come to explore whether any of these difficulties may be remedied by resorting to forms of intervention other than ex post, ad hoc measures, and if this may happen in a TRIPs-compliant fashion. Thus, this Article will finally look at that form of generalized ex ante intervention that was earlier indicated as regime design fine-tuning. In this connection, the specific issue of the availability of fair use defenses with regard to software patents may prove particularly instructive.

1. Software Patents and Fair Uses

It is well-known that digital innovation, initially protected under copyright,\footnote{177}{Of course, the history of protection of computer programs is much longer and more complicated than indicated in the stylized account supplied in the text. For the initial resort to contract and trade secret protection in the United States prior to the 1976 Copyright Act, see Ira V. Heffan, Note, \textit{Copyleft: Licensing Collaborative Works in the Digital Age}, \textit{49 Stan. L. Rev.} 1487, 1493–95 (1997).} is currently deemed to qualify for patent protection so far the latter regimes’ access requirements are met. This conclusion has been reached more or less simultaneously in the United States and in Europe.\footnote{178}{Compare State Street Bank & Trust v. Signature Fin. Servs., 149 F.3d 1368 (Fed. Cir. 1998), \textit{cert. denied}, 119 S. Ct. 851 (1999), \textit{with In re Int’l Bus. Mach. Corp.}, 31 IIC 189 (2000).} In Europe, the persisting dualism between supranational grant of patent rights and their domestic enforcement induced E.U. authorities to propose a harmonization directive specifically dealing with “computer implemented inventions.”\footnote{179}{Commission Proposal for a Directive of the European Parliament and of the Council on the Patentability of Computer-Implemented Inventions, COM (2002) 92 final (Feb. 20, 2002) (rejected by the European Parliament in second reading (June 6, 2005)) [hereinafter Draft Directive].}

These parallel developments raised a number of questions,
particularly in the area of exceptions to exclusivity.\textsuperscript{180}

This is so because software had come to be regarded as a special case as far as fair use defenses to copyright protection are concerned. Indeed, when E.U. Council Directive 91/250 was adopted to harmonize software protection throughout Europe,\textsuperscript{181} it was felt that it was necessary to give downstream program developers a guarantee as to their freedom to decompile earlier programs and to make the former interconnected and interoperable with the latter.\textsuperscript{182} A broadly equivalent outcome had earlier been reached in the United States by courts rather than by legislative action.\textsuperscript{183} In either case, the availability of specialized fair use defenses in the field of software was based on the assumption that the preservation of a corresponding area of freedom is a necessary incident of the special features of programs that, as a rule, can be looked at as the building blocks of larger multi-component products and quite often of networks, rather than discrete, self-sufficient products.

Freedom of decompilation, interconnection and interoperability proved in the meantime of crucial importance to the emergence and successful operation of open-source software. The “wide galaxy,” which is known under this label, resorts to a combination of copyright protection and contract to make sure that source code is made available to all recipients of open software and that no separate compensation is requested for its use. Even so, open source still needs to interconnect and be interoperable with dominant proprietary software in order to be commercially viable. The availability of the specialized fair use defense was essential to make these acts a form of admissible use, rather than infringement of proprietary software.

Now, the superimposition of an additional, patent-based layer of protection for computer programs is an elaborate but precarious balancing exercise. This is so because an act that would have

\textsuperscript{180} For a concise treatment, see Rochelle Cooper Dreyfuss, \textit{Examining State Street Bank: Developments in Business Method Patenting, in COMPUTER UND RECHT INTERNATIONAL} 1 (2001), and Alex Clellan, \textit{Novelty, Inventive Step and Computer-Implemented Inventions, in I BREVETTI PER INVENZIONE FRA DIRITTO EUROPEO E DIRITTO NAZIONALE} 61 (Marco Ricolfi ed., 2004).


\textsuperscript{182} See id. arts. 1(2), 5, 6, 9.

constituted a fair use under software-adapted copyright law may or may not be covered by what in U.S. and E.U. patent laws is known as experimental use defense or research exemption. Depending on the legal system and court, there is remarkably varying latitude given to this defense. Thus, the use may constitute a patent infringement as soon as the downstream product is marketed, even in situations in which under copyright law interoperability and interconnection defenses would be available.

This is the reason why it was felt by the drafters of the now defunct E.U. Draft Directive that downstream program producers should enjoy a broader, sector-specific exception even in connection with patent law. This belief mirrors the corresponding specialized fair use defenses available under copyright law. This is an interesting concept that deserves being closely analyzed, even though the legislative initiative that adopted it has in the meantime been killed. I have argued elsewhere that the language proposed in the Draft Directive was not apt to reach the intended outcome. However, before dealing with the issue of language adequacy, we should ask whether a sector-specific exception to patent rights that intended to carve out of patent exclusivity a perimeter of freedom tailored to the specific needs of downstream innovators in a given industry would be in compliance with Articles 27 and 30 of TRIPs in the first place.

Admittedly, this is not an easy question, but one that, on balance, should be answered in the affirmative.

In this specific context, the assessment of TRIPs-compliance has to be made in the light of the provisions of both Articles 27 and 30 because the latter provision is specifically devoted to laying down the requirements that are to be met if an exception to patent exclusivity is to be deemed acceptable. For its part, the former provision directly impacts on the admissible scope of limitations and exceptions by forbidding “discrimination as to . . . the field of technology” in connection with the scope of patent protection, which is the reverse of provisions regarding exceptions and limitations.


185. For a discussion of the issue and the text of a suggested provision to cure its inadequacies, see Ricolfi, supra note 146, 166–69 n.79.

Because all of the three requirements under Article 30 have to be met before an exception or limitation to patent rights is to be deemed TRIPs-compatible, we may as well start by looking at them before turning to the technology-discrimination issue arising under Article 27.

Article 30 deals with “Exceptions to Rights Conferred” and provides: “Members may provide limited exceptions to the exclusive rights conferred by a patent, provided that these exceptions do not unreasonably conflict with a normal exploitation of the patent and do not unreasonably prejudice the legitimate interests of the patent owner, taking into account the legitimate interests of third parties.”

Thus, the first requirement is that the exception is limited. It is commonly understood that to establish whether an exception is limited, one must resort to a criterion that is normative, rather than economic, because the assessment specifically concerning economic impact is dealt with under the second and third requirement.

In this connection, it should be noted that patentee’s exclusivity over making, using and selling the patented device is not directly curtailed by the freedom to decompile and, possibly, to interconnect. Freedom to decompile a patent-protected computer program, in so far as it amounts to the reverse-engineering of a product for purposes of observation or study and trial within a laboratory or experimental context (which can be assimilated to a laboratory), does not exceed the well-known exception to patent exclusivity described as experimental use or research exemption. While not uniformly adopted by all legal systems, this exemption certainly is deemed TRIPs-compliant.

Also, the extension to the patent field of freedom of interconnection, as guaranteed in the copyright context by provisions, should not generate problems of TRIPs-compatibility. For instance, Article 1(2) of Council Directive 250/91 expressly rules out the protectability of ideas and principles underlying the interfaces. In fact, interfaces normally consist of sequences of code that usually are not even included in the patent specification and may be written well after the filing. Accordingly, rules that provide for freedom of interconnection, rather than excluding interfaces that are patentable

187. TRIPs Agreement, supra note 1, art. 30 (emphasis added).
188. See Panel Report, Canada, supra note 149, ¶¶ 7.31, 7.32. For a similar discussion in connection with Article 17, dealing with exceptions to trademark rights, see Panel Report, European Communities, supra note 150, ¶¶ 7.649, 7.651.
189. See Panel Report, Canada, supra note 149, ¶ 7.69.
subject matter, should be deemed a “limited” exception within the meaning of Article 30.

The issue may be less straightforward when assessing the TRIPs-compatibility of freedom to use information obtained through decompilation and intended to achieve interoperability of a subsequent independently created computer program with a prior patented program. Again, one should consider that later interoperable programs normally are complements rather than substitutes to the initial software, and that exclusivity over making, selling and using a patented product does not necessarily and, perhaps not even typically, entail exclusivity over complementary items. If this is so, then even freedom of interoperability could conceivably be tailored in such a way as not to go beyond a limited exception to the exclusive rights.

Turning to the second and third requirements, we should keep in mind that, as earlier indicated, the corresponding tests have an economic component. Here, what should be asked to make sure that the exception does “not unreasonably conflict with a normal exploitation of the patent” is whether the limitation would have a significant negative economic impact on the market position that patent laws intend to bestow on a patentee. Similarly, the question raised by the third requirement is whether the limitation would lead to a prejudice of patentee’s legitimate interests to reap the rewards envisaged by the legal system in conferring by patent rights. It has been remarked that while the test as a whole may imply an economic assessment, the concept of normalcy is based on a notion that is normative rather than empirical. I agree. Both tests are economics-based in that they compare the situation in which the patentee finds herself when the exception applies with the hypothetical situation that would prevail when no exception was available. However, this latter hypothesis is based on a normative idea that the appropriate scope of protection should commensurate with the rationale of the grant. This approach seems to be especially clear because a reasonableness test is resorted to in both cases.

If this is the appropriate approach, then to establish whether specific

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191. On the different status as TRIPs-compliance of subject matter exclusion as opposed to what is indicated as exemptions (and referred to in this text as exceptions and limitations), see the thoughtful comments of Dinwoodie & Dreyfuss, supra note 8, at 434–43.

192. Id.

193. A similar point is made in Panel Report, Canada, supra note 149, ¶ 7.69, and in Panel Report, European Communities, supra note 150, ¶ 7.633.
exceptions for software patents, such as the specialized fair uses we earlier discussed, are acceptable, we should take into account that, while classical patent laws provided for protection of individual components, they did so on the implicit assumption that the market was based on a number of competing multi-component products. Thus, a patent over a new brake for vehicles would not be likely to translate into a monopoly over cars because brand A car furnished with the patented brake would still be in competition with cars of brand B, C, etc. On the contrary, in digital markets, the existence of competitive multi-component products is not to be taken for granted. In some cases, a number of alternative platforms compete against each other (as it happens in connection with mobile phones and videogame consoles), in others there is only one single platform that is not subject to any competition (as it happens in connection with the Internet). This is hardly surprising. Some economists suggest that in digital markets, network externalities tend to transform competition in the market into competition for the market: winner takes all.  

If we consider that, as noted earlier, programs as a rule are the building blocks of larger multi-component products, such as platforms or even networks, the questions implicit in the last two requirements are whether it is normal for patentee to have a chance to extend her monopoly from a single component to a platform and whether the same patentee does have a legitimate expectation to do so. This is a particularly troubling question, considering that, in the digital economy, competing platforms may lack or, if present, be liable to come to an end as a result of “tipping.” In a different setting, it has been decided that it is not normal for patentees to extend their monopoly beyond the term of protection—even if they originally had to wait for some supervisory approval before having the green light to initially market the patented product—and that they do not have a legitimate expectation to recoup their waiting period through such a term extension. I submit that the same conclusion should apply to the extension of monopoly from a single component to the multi-component product that incorporates the component. This conclusion seems particularly appropriate in those technological fields in which the danger of disproportionate leverage has been clearly established. Thus, freedoms of decompilation, interconnection and interoperability in the field of software patents do

195. Panel Report, Canada, supra note 149, ¶¶ 7.61, 7.82.
not run afoul of the mandate of Article 30 of TRIPs.

This is particularly so if we take into account, as required by the final part of Article 30, “the legitimate interests of third parties.” It is easy to connect this normative proposition to the general principles-based analysis we conducted above and come to the conclusion that the third parties’ interests that are to be taken into account herein are precisely the interests of current users and of new generations of innovators. Indeed, current users may be prejudiced if the upstream monopoly is allowed to be leveraged downstream. Downstream innovators are at the mercy of incumbents if they are not allowed freedom of decompilation, interconnection and interoperability. In turn, this translates into a clear danger for the long-term efficiency of the global innovation system; the avoidance of which is clearly favored by TRIPs general principles.

It appears remarkable in this case that pro-competitive concerns can be incorporated into the assessment of TRIPs-compatibility as a matter of course because the wording itself of Article 30 expressly refers to the “legitimate interests of third parties.” However, I submit that a similar approach should be followed even if this specific wording were not available, because the corresponding guideline is generalized through reference in Article 7 of TRIPs to “the mutual advantage of producers and users of a technological knowledge” and to the favor for IP protection modes shaped “in a manner conducive to . . . a balance of rights and obligations.” Therefore, the final words of Article 30 must be read as making explicit what is implicit in the overall architecture of TRIPs.

On the other hand, it might be argued that the interests of current users and downstream innovators might be taken into account if we were to test the TRIPs-compliance of an antitrust scrutiny of a refusal to deal by a software patent holder that denies access to his invention to programmers of complementary products. Therefore, it would appear inconsistent if Members were allowed to take into account those interests in connection with ex post, ad hoc interventions on IP but were not allowed to do so in connection with generalized ex ante measures. Probably, this kind of argument may have a grain of truth to it; however, I would be reluctant to make too much of it for reasons that I will

196. TRIPs Agreement, supra note 1, art. 30.
198. See supra Part I.B.2.
199. See supra Part I.B.1.
discuss in item (3) of the Conclusion. I argue that an antitrust remedy to refusal to deal in IP is based on an individualized finding of anti-competitive behavior, and that there is no way to make a generalized assumption that failure to assent to decompilation, interconnection and interoperability amount per se to abusive behavior. Thus, the parallel to antitrust cannot carry, by itself, decisive weight, even though it may corroborate the outcome reached on other grounds and on the basis of an analysis of Article 30.

It seems to me that this line of argument also disposes of the objections that might be raised on the basis of the mandate of technological neutrality under Article 27 of TRIPs. Indeed, targeted exemptions, as the ones I just discussed, may be based on important national public policies declared relevant under Article 8(1). If this is the case, the fact that some sectors are singed-out as of “vital importance” for national policies under Article 8(1) by definition implies that the measure based on this same provision may operate selectively rather than across-the-board. This is so because a TRIPs general principles-based interpretation of Article 27(1) may not altogether negate Article 8(1), and vice versa. After all, as shown above, “Art. 27 does not prohibit bona fide exceptions to deal with problems that may exist only in certain product areas.”\textsuperscript{200} Moreover, nothing would prevent Members to resort to ex post antitrust scrutiny of behavior of IP holders intended to use a sector-specific IP right to leverage a vertical or complementary market. Thus, it may be argued once again, if only to corroborate this conclusion, Article 27 may not be an obstacle to Members’ choice to pursue the goal of keeping vertical or complementary markets open to competition by means of an ex ante, generalized measure, such as a targeted exception.

So, sector-specific exceptions for software patents would be TRIPs-compliant. This conclusion may sound a bit anti-climatic at the present time, considering that the E.U. Draft Directive on software patents was just defeated. I do not think this is the case.

First, because, as indicated above, thousands of software patents are being currently granted in Europe and will continue to be granted in the future notwithstanding the rejection of the proposed Draft Directive. In this context, the introduction of an exception to patent exclusivity mirroring the specialized fair uses available in connection with copyright protected software is probably a necessity, and at a minimum, very

\textsuperscript{200} See Panel Report, Canada, supra note 149, ¶ 7.92.
advisable. And, as I am afraid that European courts are likely to prove quite hesitant in this regard, it appears appropriate for the E.U. Commission to step in, while relinquishing the rest of the rejected Draft Directive, and to restart the whole legislative process in order to introduce this one bit of legislation.

Second, because the exception we have been discussing is a nice case of what the Article called regime design fine-tuning, it has a few more general lessons we might be interested in learning. This is what this Article shall try to do in the following concluding remarks.

**CONCLUSION: WHERE DO WE GO FROM HERE?**

This Article dealt with the software patent specific exception as a case of regime design fine-tuning. This seems to make sense when applying the criteria proposed earlier. This kind of measure would work ex ante rather than ex post, because it consists of a rule that provides advance notice of the classes of behavior that remain open to third parties even in the absence of consent by patentees. Moreover, the rule is self-enforcing because it does not require any further intervention by a State authority to achieve its purpose. At the same time, this same rule is generalized because it applies to all third parties—and to all patentees—who find themselves in a pre-determined situation; that is, they are engaged in decompiling, interconnecting or making and selling interoperable programs that interfere with patented software. However, this is not an ad hoc measure because the conclusion is not rooted in a particularized two-party and adversarial set of circumstances. Finally, the re-balancing undertaken is “interstitial” because it does not seem apt to upset the basic rationale for this kind of protection.

This kind of fine-tuning exercise can be undertaken by willing Members in a quite large number of akin situations. In a prior study, I have looked at two additional study cases of regime design fine-tuning. One deals with what is called “regulatory review exception” in connection with generic versions of patented drugs. This exception concerns the opportunity for generic competitors to initiate clinical trials and testing before expiration of the controlling patent to obtain marketing approval effective after the term of protection. The other exception deals with access requirements in the field of biotechnological

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patents: the requirement of industrial application, that is, the European equivalent to what in the United States conceptualizes as utility. This field may be fine-tuned in a TRIPs-compliant way in order to make sure that the scope of protection does not unduly block further research.

Of course, this is only just a beginning. Members, if willing, may engage in many additional exercises in fine-tuning. As indicated earlier, Members are likely to have good reasons to do so. As far as developing Members are concerned, the incentive should be pretty clear by now.202 Even the United States, Europe, Japan and other industrialized countries should have sufficient grounds to start working in this direction to ensure that the engine of innovation does not grind to a halt,203 particularly if we believe that current innovation-oriented competition policy is insufficient to guarantee the degree of competitive openness likely to be required in innovation markets.204

Of course, the crucial task for Members interested in engaging in this exercise is to make sure that in doing so they respect the mandate of TRIPs-compatibility. It is quite likely that appropriate criteria to make this sort of assessment will eventually emerge on the basis of a sufficient number of test cases. However, it would appear that, on the basis of the findings accumulated thus far, we may already be in a position to make a few preliminary remarks.

Indeed, it is time to come back from the specific perspective of regime design to the question whether and to what extent the interpretation and application of TRIPs norms, particularly those that are necessary for TRIPs-consistency, is impacted by consideration of pro-competitive concerns either admitted or actively encouraged by TRIPs itself.

In this connection, a few remarks seem appropriate:

1. Consideration of the legitimate interests of third parties expressly referred to in Article 30 to assess whether the admissibility of an exception to patent exclusivity can and should be generalized in the evaluation of TRIPs-compliance of other exceptions as well as of other features of regime design, such as access requirements and scope of protection. This is so because consideration of non-IP interests, such as access claims to IP staked by current users and future generations of innovators, is explicitly suggested by general principles analysis. For

203. In a similar vein, see Dinwoodie & Dreyfuss, supra note 8, at 432, 447–48. The authors advocate greater fluidity in reading TRIPs in view of preserving the public domain.
204. See supra Part II.B.2.
instance, Article 7 of TRIPs references “the mutual advantage of producers and users of a technological knowledge” and the favor for IP protection modes shaped “in a manner conducive to . . . a balance of rights and obligations.”

For the purpose of establishing what is the net outcome of protection that is non-negotiable, a modicum of balancing between IP- and non-IP interests is allowed under a TRIPs general principles-based interpretation. In this regard, one should also take into account that TRIPs in the area at the intersection between IP and competition builds on an architecture based on authorization plus reticence, which suggests that Members can retain a sufficient amount of flexibility required for that balancing act without necessarily violating mandatory minimum standards.

(2) Another contribution towards clarification of the issue of TRIPs-compliance can be derived from the discussion of the mandate of technological neutrality under Article 27(1) that has cropped-up in connection with both local working requirements and software patents. In this connection, it has appeared that even a technology-specific feature of regime design might be reconciled with the principle of technological neutrality under a general principles-based interpretation. This approach suggests that when problems exist only in certain product areas, and these involve important national public policies under Article 8(1), even measures or rules operating selectively may be TRIPs-compliant.

(3) What would have much more far-reaching consequences would be the possibility of arguing for a sort of “equivalency” of antitrust intervention and regime design fine-tuning. One could indeed make the case that Members have the option of exerting the powers they retain at the intersection between IP and competition either through antitrust measures or by regime design fine-tuning. In doing so, they have a choice as to the kind of measure from time to time selected. Therefore, whatever outcome may be reached through ex post antitrust intervention can also be obtained by ex ante and generalized rules concerning access requirements, scope of protection, exceptions and the like.

If this approach were acceptable, it would support some kind of “strong form” equivalency between different pro-competitive measures allowed for by TRIPs, the consequences of which would be rather

205. TRIPs Agreement, supra note 1, art. 7 (emphasis added).
sweeping. Indeed, we have had a chance to look at the remarkably wide extent of flexibility retained by Members at the intersection of competition and IP. We have also argued that this flexibility is enhanced rather than restricted by TRIPs general principles analysis. Further, we concluded that the spectrum of TRIPs-compliant models that can be adopted in the field of classical competition or antitrust law is very broad. In terms of practical impact, strong form equivalency would mean that one should not worry too much if classic competition law has in the meantime become obsolete, because what was lost in terms of antitrust may entirely be regained by recycling it through a well-tempered, fine-tuning exercise.

However, it is doubtful whether one can make this kind of argument because ex ante and generalized measures are not perfect equivalents to ex post and ad hoc measures for purposes of TRIPs-compliance. In some regards, the former may be preferable to the latter even in terms of furthering TRIPs-specific goals, such as predictability of outcomes and non-discrimination among IP holders of different nationalities, for the reasons discussed earlier. On the other hand, as hinted in the previous paragraph, one cannot disregard the fact that the legitimacy of ex post and ad hoc measures is rooted in a two-party, adversarial context. In antitrust, the intervention is legitimate insofar as it is a reaction to specific behavior that may be considered either restrictive (for bilateral behavior) or abusive (for unilateral behavior) under fact-intensive circumstances as established through a finding by a decision-making authority. Ex ante generalized rules are different; they are automatic consequences of a legally typical set of circumstances rather than a remedy to unlawful behavior. Accordingly, unlawful behavior cannot be assumed as typical without fact-finding by a specific authority in an adversarial context. After all, this is the kind of reasoning that earlier induced us to conclude that there cannot be a remedy against a refusal to deal in IP unless specific evidence of additional and separate anti-competitive behavior is found.

Therefore, it would seem that there may be cases in which TRIPs enables Members to further pro-competitive concerns only through one form of intervention—antitrust—even though it does not allow for the

206. See supra Part I.A.3.
208. See supra Part II.A.2.
generalization of this measure by the adoption of an ex ante rule. The latter would dispense from the finding of specific inadmissible behavior by the competent authority.

This does not amount to saying that pro-competitive concerns are relevant only for purposes of antitrust intervention and for the assessment of their TRIPs-compatibility. Far from it. On the contrary, a general principles-based analysis helps highlight the extent in which this horizontal, pro-competitive feature of TRIPs is relevant to the assessment of measures targeting restrictive behavior in international transfer of technology and regime design fine-tuning. The point I am making is that this same horizontal feature has its own limits. Some kind of intervention may be based on specific requirements that must be established in ways that cannot possibly be replicated in connection with different forms of measures or intervention. Thus, it would seem that what I earlier called “equivalency” can be adopted only in its weak form. This weak form accepts the generalized relevance of pro-competitive goals in the interpretation and application of all TRIPs provisions yet insists that careful case-by-case analysis is required before we may conclude that Members are, in a given context, enabled to use tools different from antitrust to pursue objectives that TRIPs authorizes only in specific connection with classic antitrust intervention.

This approach is probably apt to lead Members that might wish to counter IP protectionist tendencies only half-way in their effort. Thus, if one is to respond to the question that forms the title of this Article, then the response is likely to be in the negative. The conclusions reached here cannot in any plausible way be described as a complete remedy to IP overprotection. Nevertheless, if Members decided to take advantage of the significant fluidity that TRIPs enables, it would still be a very welcome result indeed.