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SECURING THE FUTURE OF INTELLECTUAL PROPERTY: INTELLECTUAL
PROPERTY OWNERS AND THEIR NODALLY COORDINATED
ENFORCEMENT PYRAMID

Peter Drahos†

I. Introduction

In any economist’s account of what makes a successful economy the institution of private property is never too far away and is usually central. Douglass North, in answering his question “[w]hy aren’t all the countries in the world rich?”, concludes that countries create well-defined property rights that stimulate individuals into productive activity by raising the level of private return to meet the social return.¹ Theories that advance an institutional explanation of development include widely distributed and enforceable property rights as a key institution that promotes development.² Well-defined and secure property rights are part of the package of reforms that were advocated by the Washington consensus.³

The efficiency gains and economic growth effects of private property rights depend upon those rights being linked to an enforcement procedure. Property rights that are not tied to an enforcement procedure of some kind run the risk of failing to be secure. Enforcement mechanisms for property are fundamental to the creation of expectations in individuals about whether or not they have security and control over time with respect to an asset. Intellectual property rights represent an interesting enforcement challenge because copying capabilities are diffusing throughout the world (the Internet being the most obvious example), the incentives to copy are increasing and enforcement depends on a costly legal infra-structure. On top of this, the broader cultural legitimacy of intellectual property rights, upon which effective enforcement ultimately depends, is not evolving in the way many intellectual property owners would like because intellectual property rights have become the targets of critical campaigning. The civil society campaigns on biopiracy and access-to-medicines are two examples

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of global campaigns that have placed intellectual property rights at the root of the problem.  

This article shows how intellectual property owners are meeting some of the many challenges raised by having to enforce intellectual property across borders, in global markets and in sometimes morally controversial circumstances. Drawing on the theory of enforcement pyramids, the theory of forum shifting and the theory of nodal governance, the paper shows how the nodal co-ordination of an international enforcement pyramid offers non-state actors the possibility of securing compliance by states with emerging global standards of intellectual property rights. Whether or not the enforcement of these global standards of intellectual property will generate efficiency gains for states is a separate question that this paper does not answer. However, the final section of the paper draws attention to the link between the enforcement pyramid and the problem of unproductive property rights. Intellectual property is an area where there is a serious risk of rent-seeking behavior. The global intellectual property ratchet and its accompanying international enforcement pyramid offer the possibility of securing global rents.

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5 See generally John Braithwaite, To Punish or Persuade: Enforcement of Coal Mine Safety 142 – 147 (1985) (discussing the enforcement pyramids as applied to the American Mine Safety and Health Act) [hereinafter TO PUNISH OR PERSUADE]; Ian Ayres & John Braithwaite, Responsive Regulation: Transcending the Deregulation Debate 35 – 41 (1992) (discussing pyramid strategies of responsive regulation).


II. The Global Intellectual Property Ratchet

During the period that the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) was being negotiated (1986-1993) there were suggestions that if developing countries agreed to TRIPS the U.S. would ease off negotiating intellectual property standards bilaterally. During the 1980s the U.S. had set the scene for TRIPS through a series of strategic bilateral negotiations on intellectual property with countries like South Korea and Brazil. An incentive that was held out to developing countries for the successful negotiation of TRIPS was that the U.S. would desist from using its trade enforcement tools to obtain the standards that it wanted.

After TRIPS was concluded the U.S. actually intensified the level of its bilateral activity. It used its trade enforcement tools under its Trade Act of 1974 to review the intellectual property standards of more and more countries and it concluded many more bilateral agreements related to intellectual property than it had in the 1980s. In effect it had created, without anybody really noticing, a global regulatory ratchet for intellectual property. Moreover, the ratchet only traveled in the direction of stronger standards.

The U.S. was the principal architect of the global regulatory ratchet for intellectual property, with the EU to a lesser extent also making use of it. In short form, this ratcheting process is dependent upon:

(a) a process of forum shifting – a strategy in which the U.S. and EU shift the standard-setting agenda from fora in which they are encountering difficulties to those fora where they are likely to succeed;

(b) coordinated bilateral and multilateral strategies for intellectual property; and

(c) the entrenchment in agreements on intellectual property of a principle of a minimum-but-not-maximum standard of protection.

Forum-shifting in international regulation is made up of three basic strategies – moving an agenda from one organization to another, leaving an organization and pursuing agendas simultaneously in more than one organization. The basic reason for forum-shifting is that it increases the forum-shifter’s chances of victory. The rules and modes of operation of each international organization constitute the pay-offs that a state might

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11 Braithwaite & Drahos, supra note 6, at 566.

12 Id. at 564.
expect to receive if it plays in that particular forum. Forum-shifting is a way of constituting a new game. Facing defeat or a sub-optimal result in one forum, a state may gain a better result by shifting its agenda to a new forum. In their study of global business regulation Braithwaite and Drahos found that forum-shifting had become important after the Second World War and that the U.S. state was the main state to make use of it.\(^\text{13}\)

The principle of minimum-but-not-maximum protection plays a vital role in the regulatory ratchet. Each bilateral or multilateral agreement dealing with intellectual property contains a provision to the effect that a party to such an agreement may implement more extensive protection than is required under the agreement or that the agreement does not derogate from other agreements providing even more favorable treatment.\(^\text{14}\) This means that each subsequent bilateral or multilateral agreement can establish a higher standard.

The global ratchet for intellectual property consists of waves of bilaterals (beginning in the 1980s) followed by occasional multilateral standard-setting exercises (See Diagram 1 below). Each wave of bilaterals or multilateral treaty never derogates from existing standards and very often sets new ones.

\(^{13}\) Id. at 564-65.

The dash arrows indicate that the U.S. has the capacity and resources to pursue negotiations in different fora at the same time. Where the U.S. or the EU are at any given moment in the cycle of ratcheting is determined essentially by how much effective resistance they are meeting in terms of their negotiating objectives. The bilateralism that preceded TRIPS and that laid the foundation for TRIPS was triggered by the resistance that the U.S. encountered on its intellectual property agenda at the GATT.\textsuperscript{15} Presently, it is clear that the U.S. is in a bilateral phase. The Ministerial Declaration that launched the Doha round of multilateral trade negotiations in 2001 contained only a modest work program in relation to TRIPS with geographical indications being the principal item listed for negotiation.\textsuperscript{16} Bilaterally, however, the U.S. has been busily negotiating free trade agreements (FTAs) with countries that it sees as being important regional models. Table 1 below provides an indication of recent activity by the U.S. in the negotiation of FTAs:

\textsuperscript{15} Peter Drahos & John Braithwaite, Information Feudalism: Who Owns the Knowledge Economy? 134 (2002).

\textsuperscript{16} See Ministerial Conference, Ministerial Declaration, WT/MIN(01)/DEC/1, paras. 17-19 (Nov. 20, 2001).
Table 1 - The U.S. and Recent Free Trade Agreements and Negotiations

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The focus on FTAs at this time can also be explained in terms of the effective resistance that the U.S. has been encountering at the TRIPS Council over the last several years.\(^{17}\) The TRIPS Council was the venue in which African states in June of 2001 launched an initiative aimed at examining the role of intellectual property rights in access to medicines. The end of 2001 saw WTO members agree to the Declaration on the TRIPS Agreement and Public Health, a Declaration that the U.S. pharmaceutical industry counted as a blow against its interests and which it did its best to downplay.\(^{18}\) Similarly, the review of Article 27(3)(b) that was started in 1999 has not run the way that the U.S. would have liked. In essence the U.S. wants to bring TRIPS into line with what is its own domestic

\(^{17}\) Peter Drahos, *Developing Countries and International Intellectual Property Standard-Setting*, 5 J. WORLD INTELL. PROP. 765, 774, 780-783 (2002).

position—"virtually anything is patentable." Instead, what eventuated during the course of the review was a very wide-ranging dialogue in the TRIPS Council that raised many issues about patents, including the need to better integrate the provisions of TRIPS with a regulatory approach towards biodiversity that states had agreed to in the context of the Convention on Biological Diversity. Developing countries were able to resist U.S. proposals in the context of the TRIPS Council because outside of the Council they were being given assistance by civil society actors. These actors were helping to provide technical expertise, and through global campaigning they proved highly effective at raising questions about the origins of TRIPS and its moral legitimacy. This in turn expanded the art of the possible when it came to TRIPS. Moreover, it was to the advantage of both civil society and developing countries that the TRIPS Council was one highly visible forum on which they could concentrate their resources.

This effective resistance in the TRIPS Council has led to forum-shifting by the U.S. In the FTAs that it has recently concluded it has sought and, in many cases, obtained standards of intellectual property from the other state that bring that state closer to the U.S. domestic position. A good illustration can be found in the provisions of the U.S.-Singapore FTA that deal with patents. Under the U.S.-Singapore FTA the parties may only exclude those inventions from patentability that are specified in Article 27.2 and 27.3(a) of TRIPS. In other words, Article 27.3(b) of TRIPS has been bypassed. TRIPS also bars its members from using its provisions to address the issue of the exhaustion of intellectual property rights.

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20 For an overview and summary, see Boniface Guwa Chidyausiku, Article 27.3(b) of the TRIPS Agreement: The Review Process and Developments at National and Regional Levels, in TRADING IN KNOWLEDGE: DEVELOPMENT PERSPECTIVES ON TRIPS, TRADE, AND SUSTAINABILITY 101 (Christophe Bellmann et al. eds., 2003).
22 Under the Bipartisan Trade Promotion Authority Act of 2002 the Congress has stated that one overall negotiating objective for the U.S. is to obtain in bilateral and multilateral agreements provisions that "reflect a standard of protection similar to that found in United States law." 19 U.S.C. § 3802(b)(4).
24 See TRIPS, supra note 14, at art. 6.
U.S.-Singapore FTA, however, deals with the exhaustion issue by requiring each Party to give the patent owner a remedy against a third party who disturbs a contractual arrangement between a patent owner and licensee.\(^{25}\) TRIPS does not specifically address the rights of generic manufacturers to make use of a patented drug prior to the patent expiring for the purposes of obtaining marketing approval of their generic product from their relevant regulatory authority. However, as Canada pointed out in the Canada–European Community pharmaceutical products case, the understanding of key players such as the U.S. in the TRIPS negotiations was that this exception was preserved by Article 30 of TRIPS.\(^{26}\) Moreover, the state practice after TRIPS came into force was also consistent with the understanding that a regulatory review exception was permitted by Article 30.\(^{27}\)

In principle, Article 30 would permit a variety of approaches to regulating the relationship between generic pharmaceutical companies and originator companies. FTAs are, however, circumscribing the openness of Article 30 in TRIPS. These agreements contain detailed standards on the issue of access to patented pharmaceutical products by generic companies for the purposes of obtaining marketing approval. In the case of the U.S.-Singapore FTA, use by a third party of the patent is limited to obtaining marketing approval including in cases where the export of the generic version is permitted.\(^{28}\) It follows that, if a Singaporean generic manufacturer could take advantage of an export market that was not patent-barred, it would not be able to export in commercial quantities to that market until the patent in Singapore had expired. The compulsory licensing provision of the U.S.-Singapore FTA is, unlike TRIPS, drawn in the negative.\(^{29}\) This means that compulsory licensing is prohibited except in specified circumstances (to remedy anticompetitive acts, for public non-commercial use, national emergency or other circumstances of extreme urgency).\(^{30}\) It also contains an express restriction on the transfer of "know how", something not to be found in TRIPS. A country like Singapore that agrees to this kind of provision on compulsory licensing is clearly

\(^{25}\) Singapore FTA, supra note 23, at art. 16.7.2.


\(^{27}\) Canada pointed out that Germany, Italy, Japan, Portugal, Argentina, Australia and Israel had all allowed an exception to patent rights for the purposes of generic producers obtaining marketing approval. See id.

\(^{28}\) Singapore FTA, supra note 23, at art. 16.7.5.

\(^{29}\) Id. at art. 16.7.6.

\(^{30}\) The U.S. pushed for such a compulsory licensing provision in the context of the TRIPS negotiations but was unsuccessful. See JAYASHREE WATAL, INTELLECTUAL PROPERTY RIGHTS IN THE WTO AND DEVELOPING COUNTRIES 320-21 (2001).
circumscribing the rights it would otherwise have under TRIPS to enact a wider provision.

It is also worth noting that countries by adopting this kind of provision for compulsory licensing in their patent law may be going even further than the U.S. does. Compulsory licensing is not part of U.S. patent law, but provisions on compulsory licensing are to be found in other parts of U.S. law such as the Clean Air Act and the Atomic Energy Act. In addition, compulsory licenses are a key remedy in the context of antitrust litigation. Countries that adopt a restrictive approach to compulsory licensing as part of their patent law and do not compensate by having licensing access provisions in other parts of their law, or do not have strong competition law and authorities, are clearly offering patent owners stronger rights than exist in U.S. domestic law.

Another example of the way in which the U.S. is using FTAs to bring other countries into line with its own domestic provisions is to be found in Article 16.8 of the U.S.-Singapore FTA. This provision deals with the treatment of information by a regulatory authority that relates to the safety or efficacy of a pharmaceutical or agricultural product and is required to be submitted by that authority for the purposes of obtaining marketing approval. TRIPS deals with this situation somewhat succinctly in Article 39.3. Members are required to protect such data against "unfair commercial use" provided that it required "considerable effort" to generate, that it is undisclosed and that it is a new chemical entity. The U.S.-Singapore FTA takes this open and flexible standard and converts it into something much more specific. Under it Singaporean authorities cannot, in effect, rely on the information that has been submitted for the purposes of giving approval to a third party (a generic manufacturer) unless, of course, the original party submitting the information consents to such use. The period of non-reliance is five years for pharmaceutical products and ten years for agricultural chemical products. This obligation to maintain the exclusivity of the data applies even if it has not been submitted in Singapore but in another country, and Singaporean authorities are relying on marketing approval by a regulatory authority in that country. Further the obligation to maintain this exclusivity of data is independent of the period of patent protection in the product. These provisions essentially bring Singapore into line with U.S. law.

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32 See WATAL, supra note 30, at 200-01; see also Singapore FTA, supra note 23, at art. 16.8.
III. Intellectual Property Owners and their Nodally Coordinated
Enforcement Pyramid

The previous section showed how the U.S. has, through a strategy of forum shifting, been able to create a global intellectual property ratchet. Putting higher and higher standards of intellectual property rights on the books is only the first step. From an economic point of view the private property right over an asset must also be accompanied by a belief that the property right is secure and that the economic benefits of the asset will actually flow to the owner. This in turn requires an enforcement procedure of some kind. One of the important achievements of TRIPS was to oblige many states to enact enforcement procedures, civil and criminal, to deal with the infringement of intellectual property. From the point of view of developing states the costly investment in enforcement would be to the benefit of mainly foreign intellectual property owners.\(^3\) Assuming such states to be rational actors with limited resources, one would predict that they would enact enforcement procedures and then turn a blind eye to actual enforcement. From the point of view of intellectual property owners, compliance by governments with their obligations, especially on enforcement, is the single most important goal to be achieved.

This section of the paper argues that intellectual property owners have sought to achieve the goal of compliance through the creation of an international enforcement pyramid that is nodally coordinated. The theory behind enforcement pyramids is well known and summarized briefly below. We will also see that use by the U.S. of its trade enforcement tools follows pyramidal theory. The distinctive feature of this international enforcement pyramid is its nodal co-ordination by private sector actors. Nodes are specific organizational means through which the resources of multiple networks are concentrated to produce action. The crucial point about nodally coordinated pyramids is that the enforcement reach of the pyramid increases. In the case of intellectual property rights, the pyramid has real international reach and offers private sector actors a means by which to achieve the goal of secure intellectual property rights. Whether all of these rights are in fact productive property rights is a separate issue.

A. Enforcement Pyramids

After John Braithwaite’s development of the theory of the enforcement pyramid a considerable body of scholarship has shown both theoretically

and empirically how enforcement pyramids can increase compliance.\(^{34}\) The key idea behind the pyramid is that punishment and persuasion should be linked in a certain sequence that begins with persuasion at the base of the pyramid and ends with the most punitive sanction at the apex of the pyramid. The assumption about human nature that lies behind this linkage sequence is that there are different actor types (e.g. rational, virtuous, irrational). The different enforcement levels of the pyramid are aimed at these different types. At the base of the pyramid are the 'soft' tools of regulation such as guidelines, protocols and educational strategies, or in generic language the tools of dialogue and persuasion. These soft tools assume that actors are disposed to do the "right thing" and are willing to cooperate. As one moves up the pyramid, the tools of regulation begin to assume a more coercive character until, at the top of the pyramid, there is some form of incapacitation (this depends on the area of regulation but may involve imprisonment, suspension of trade, loss of license and so on). Where the regulator is unsuccessful at the bottom of the pyramid he or she can move up the pyramid to deploy more coercive tools. An enforcement pyramid gives a regulator a unified set of regulatory strategies that can be deployed against all types of actors (virtuous, rationally calculating, resistant, incompetent). As one type of strategy fails because of the type of actor involved, another is wheeled into place. Advocates of the enforcement pyramid argue that there should be a presumption in favor of starting at the base of the pyramid with dialogic and information-based strategies.\(^{35}\) This is less costly, more respectful and ultimately makes the use of coercion more legitimate, because non-coercive strategies have been given a chance to work.

The use by the U.S. of its trade enforcement tools in the context of trade disputes including intellectual property follows the shape of an enforcement pyramid (see Diagram 2 below).\(^{36}\) Typically, the U.S. will begin an informal dialogue with a state if it believes that the state is not meeting standards of adequate and effective protection for intellectual property. Over time the dialogue becomes more formal. If the state fails to act, it finds itself being listed for more serious attention. The various lists that are kept by the USTR allow the USTR to make finely tuned escalations

\(^{34}\) First put forward in JOHN BRAITHWAITE, TO PUNISH OR PERSUADE: ENFORCEMENT OF COAL MINE SAFETY, (1985); see also IAN AYRES & JOHN BRAITHWAITE, RESPONSIVE REGULATION: TRANSCENDING THE DeregULATION DEBATE 35-38 (1992); JOHN BRAITHWAITE, RESTORATIVE JUSTICE AND & RESPONSIVE REGULATION (2002) [hereinafter RESTORATIVE JUSTICE].

\(^{35}\) See RESTORATIVE JUSTICE, supra note 34, at 30.

It also means that states that make attempts to fix up their intellectual property problem can be taken off a list or shifted to a less serious one. Building forgiveness and reward into the pyramid adds to its reasonableness and ultimately effectiveness, because those on the receiving end can see the pyramid is not about unreasoning coercion. At the apex of the pyramid lie trade sanctions such as the withdrawal of trade benefits or the imposition of duties on goods coming into the U.S. market.

The ability of the USTR to wipe out the U.S. domestic market of another country across a range of products is a big stick, but it is infrequently used by the U.S. The theory and empirical work on enforcement pyramids shows that regulatory agencies that carry big sticks rarely use them. Its simple presence combined with a belief about the inexorability of its use leads most targets of the pyramid to comply before the big stick is actually wielded. At the same time the occasional use of the big stick projects credibility and makes the targets of enforcement in the lower reaches of the pyramid think harder about the potential costs of non-compliance. A recent statement by the current USTR, Robert Zoellick, neatly captures this pyramidal thinking:

"We resolve most problems without resorting to formal dispute proceedings, which take additional time and involve uncertain outcomes. Most U.S. companies suggest formal dispute proceedings only as a last resort. When we determine it will be the most effective we [sic] to settle disputes, we pursue cases under the WTO, NAFTA, or our new FTAs."
Diagram 2 - U.S. Trade Enforcement Tools as an Enforcement Pyramid for Intellectual Property Rights

B. The Nodally Coordinated Enforcement Pyramid

The idea of nodal coordination derives from recent theoretical approaches that make networks and nodes the principal categories in theorizing about changes in governance.41 Manuel Castells, for example, argues that networks have overcome their historical weaknesses in coordinating functions and in bringing resources to bear on goals by

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becoming information networks. These networks have adaptability and superior levels of coordination and management of complexity. The principal effect of information networks is changes in power relationships that see traditional centers of power bypassed by new networks of capital, production, trade and communication.

Power must still be exercised in the networked world. Nodal governance is a theory that focuses on the role of nodes in governance and especially in the way that networks can be linked to create concentrations of power for the purposes of exercising governance. Nodes are either actors within a network or the organizational product of two or more networks being tied together for a common purpose. This latter type of node (termed a 'superstructural' node) does not integrate networks, but rather is a structure that brings together actors that represent networks in order to concentrate the resources and technologies for the purpose of achieving a common goal. Superstructural nodes are the command centers of networked governance.

In broad terms nodal governance is an adaptive response to the problem of information that confronts governance of all kinds, but especially networked governance. Governance requires information. The dramatic proliferation of new types and new scales of networks that has been enabled by information technology means that the information that matters to governance is dispersed through a multiplicity of networks many of which operate independently of each other. No one network, public or private, has information omniscience. The response of actors to this complexity has been to find ways to link networks to produce new structures of governance, a response that can be labeled nodal governance. These structures do not bring information omniscience to actors, but they do bring more information and importantly resources and technologies that enable actors to become centers of governance. Nodes in the networked world are organizational centers in time and space from which the actions of governance flow.

Before showing how nodal co-ordination works for the enforcement of intellectual property rights, we need a better view of the information and co-ordination problems that face large corporate owners of intellectual property. At the most basic level there has to be agreement amongst individual corporations about which standards need to be strengthened and enforced. There appear to some areas where one would expect to find agreement such as increasing the duration of terms of protection. But even here there will be differences of opinion amongst companies and industry sectors. Lengthening the patent term matters to the pharmaceutical industry but is less important to semiconductor chip manufacturers. A longer copyright term is important to publishers but only provided it applies to works already in existence. It hardly matters to software owners. There are

\[42\] Castells, supra note 41, at 15.
also fundamental questions about which parts of intellectual property (copyright, patents, trademarks) to prioritize in the global quest for stronger protection. Using the global intellectual property ratchet to set standards requires, in other words, co-ordination on which standards are the important ones. The ratchet also gives rise to other kinds of co-ordination issues. When should the U.S. pull back from the WTO and shift the main game to the bilaterals? Which countries should be the target of bilaterals? Which countries should be the targets of enforcement action under the pyramid? Individual U.S. companies with different investments and intellectual property interests in different countries are likely to give different answers to these questions. Pfizer may think that India should be the priority, Microsoft may be most worried by piracy in Russia and neighboring countries and Hollywood (in the shape of the American Motion Picture Association) may think that the real problems lie in Italy, Malaysia and China.

The U.S. trade enforcement pyramid is characterized by fine gradations, giving the USTR many enforcement options. But running this enforcement pyramid is a highly information-intensive exercise. Where, for example, on the various levels of the pyramid does the USTR put the Ukraine from year to year? How does the USTR know, for instance, that the Ukraine is a hotbed of CD piracy? If the information comes from a company how does the company know? If the Ukraine passes a law how does the USTR know if it meets the U.S. test of being adequate and effective? How does the USTR know that the law is being properly enforced by Ukrainian police and the courts? Is it enough to rely on an annual report by the Ukrainian police? If not, what is a credible source of information? These kinds of questions have to be answered for the 80 or so countries that now come under annual review by the USTR for their practices on intellectual property.43

The way in which U.S. companies have approached these kinds of basic information and co-ordination problems is to create a cluster of nodes around the trade enforcement pyramid. Since only a small number of nodes are involved the possibility of co-ordination amongst them becomes possible. Coordination amongst the networks that the nodes represent would create an almost intractable coordination problem because the networks have hundreds of companies as members. The International Intellectual Property Alliance (IIPA), for example, has a membership of over 1100 companies and the Biotechnology Industry Organization (BIO)

has more than a 1000 member organizations. The possibility of nodal coordination has also been deepened by the fact that the nodes have overlapping membership. The Business Software Alliance (BSA), for example, is a key node on copyright issues and is also a member of the IIPA and the Industry Functional Advisory Committee on Intellectual Property Rights for Trade Policy Matters (IFAC-3), the committee that advises Congress and the President on whether trade agreements meet the goals of the U.S. on intellectual property. Sometimes the overlapping membership occurs at the level of the individual wearing more than one nodal hat. By way of example, Eric Smith, the President of the IIPA is also the Chairman of IFAC-3. Diagram 3 shows the nodally coordinated enforcement pyramid for intellectual property. (The full cluster of nodes and their intersecting relationships are not represented for reasons of space and clarity.)

\[44\] Details of the membership of these associations are available from their websites. See http://www.bio.org; http://www.iipa.com.
In Diagram 3 the dash arrows represent membership by one node of another node (for example, Microsoft is a member of the IIPA, the BSA and IFAC-3). The other arrows indicate that each of these nodes can work and communicate directly with the USTR if the need arises. The thicker arrows indicate that the relevant node also has an important coordinating role. In the case of the enforcement pyramid for intellectual property IFAC-3 has the most important coordinating role. It ties together more networks than any other node and so is in the best position to deal with the problems of co-ordination and information that were described earlier.
IFAC-3 is a part of the private sector advisory system that advises and influences U.S. trade policy. This system is made up of 33 advisory committees that have provision for approximately 1,000 members. It is a three-tiered system with the Advisory Committee on Trade Policy and Negotiations at the top, six policy advisory committees in the second tier and 26 sectoral, functional and technical advisory committees in the third tier.

In a trade negotiation, information and expert knowledge is everything. This is especially true in the case of intellectual property because the U.S. is typically seeking to impose complex positive standards of law on a country. This requires trade negotiators to know what are the gaps in standards or even what are the interpretation of the standards in that country from the perspective of U.S. law. Negotiators that are able to draw on expert legal knowledge will have an advantage in a negotiation. The perspective of that expertise has to come from industries that actually trade in intellectual property related goods and know best the legal rules they want to impose on their competitors in the other country. Every trade negotiator wants to come home with trade gains.

In the case of trade agreements that relate to intellectual property, the technical detail of these agreements is monitored by IFAC-3. The membership of IFAC-3 is made up of 20 members drawn from Industry Sector Advisory Committees and another 20 drawn from the private sector areas who provide the committee with a large pool of expertise in intellectual property. Under its charter IFAC-3 is to provide detailed advice on intellectual property issues in trade agreements negotiated by the

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USTR.\textsuperscript{47} So, for example, in the case of the U.S.-Singapore FTA, IFAC-3, in the words of its report, "advised U.S. negotiators on, and reviewed draft texts of, of the U.S.-Singapore FTA intellectual property chapter."\textsuperscript{48} IFAC-3 is a committee that gets its hands dirty by reviewing and drafting specific agreements. Importantly, IFAC-3 reviewed the U.S.-Singapore FTA in the context of other multilateral and bilateral agreements and initiatives that the U.S. had achieved. It does this work across all U.S. trade initiatives in intellectual property, whether bilateral, regional and multilateral. It is thus able to co-ordinate at a technical level the work it does across these different fora, thereby ensuring that U.S. trade negotiating initiatives push intellectual property standards in the direction that U.S. industry would like. The technical expertise on IFAC-3, as well as the expertise available to it from the corporate legal divisions of its members, means that, for example, it can evaluate a country's intellectual property standards in detail when that country seeks WTO accession and it can provide detailed assessments of the standards that USTR negotiators must bring home in a negotiation.

Formally, IFAC-3 must report to the President, the USTR and Congress when the President notifies Congress of an intention to enter into a trade agreement. This formal role, however, represents only a small part of a more complex system of private sector nodal governance. Members of IFAC-3 work outside of the committee to ensure that the U.S. remains committed to an agenda of globalizing U.S. standards of intellectual property. So, for example, the Biotechnology Industry Organization, which is a member of IFAC-3, has over the years independently lobbied the USTR on the question of intellectual property rights. Its agenda is a matter of public record and is neatly summarized in a letter of January 29, 2003 to the USTR, Robert Zoellick: "[t]he United States' intellectual property system is the best in the world, and BIO advocates the establishment of global standards protecting intellectual property comparable to those in the United States."\textsuperscript{49}

Naturally, when BIO sits on IFAC-3 it brings its advocacy position with it. A seat on IFAC-3 means that BIO is able, in co-operation with the other members, to provide technical and drafting advice to the USTR as to the kind of standards that meet the desires of the organizations that BIO


represents. There are a number of incentives for the USTR to be attentive to the suggestions of IFAC-3, including the superior expertise of the committee, the fact that the negotiating mandate in the Trade Act of 2002 requires the USTR to seek standards of protection comparable to U.S. domestic law and that IFAC must ultimately write a report, as it did in the case of U.S.-Singapore FTA, that endorses the agreement as being in the economic interests of the U.S.. The upshot is that the standards that members of IFAC-3 seek are very often the ones they achieve, especially in bilateral negotiations where the U.S. almost always has superior bargaining power. So, for example, BIO has urged that where there are delays by trading partners in the granting of patents there should be compensatory extensions of the patent term, and it has also advocated that trading partners adopt U.S. standards of data protection for pharmaceutical products. Articles 16.7 and 16.8 of the U.S.-Singapore FTA implement these U.S. domestic standards in Singapore. BIO also works in other ways outside of IFAC. For example, it responds to the USTR’s request for public comment on which countries should be the subject of ‘Special 301’ listing and as a recognized international NGO in WIPO it can be active in pushing its position on patents in the WIPO Patent Agenda process.

By clustering nodes around the enforcement pyramid and nodally coordinating over its use, the key private sector players in the U.S. have found a means by which to get other governments to take their obligations on intellectual property seriously. IFAC-3 is not the only node that plays a part in creating a culture of enforcement across the globe on intellectual property. Other nodes and the networks they lead on this issue also provide the USTR with information about piracy and infringement and make suggestions as to the level of enforcement activity. The IIPA and the BSA each file separate 301 reports and recommendations to the USTR. But by virtue of being part of the same compact nodal structure they can coordinate and project consensus to the USTR on vital issues. This in turn enables the USTR to work out which governments are the most egregious offenders as well as those that need lighter prodding on the enforcement of intellectual property.

There is one last point to make about the relationship between nodal governance and the enforcement pyramid. By concentrating resources around the trade pyramid, corporate intellectual property owners have increased the enforcement reach of the pyramid. The enforcement reach of a pyramid is dependent upon obtaining information about non-compliance, projecting consensus about its use and increasing the number of fora in which it can operate. The more companies and networks that feed information into the nodal structure about a country’s practices on intellectual property and the more countries about which there is information, the greater the reach of the pyramid becomes. Diagram 4 below presents a simple case of the relationship between nodes and the reach of enforcement pyramids.
In this particular case when Node 1 alone is providing information relevant to the deployment of the pyramid the enforcement reach is E-F. When Node 2 joins it becomes B-C and when Node 3 joins it reaches A-D. It does not follow however that increasing the number of nodes will always lead to a commensurate increase in the enforcement reach of the pyramid. Nodal co-ordination that is based on the creation of supra-structural nodes such as IFAC-3 allows large and complex networks to pool resources and to co-ordinate. The effect of this type of nodal co-ordination is to limit the number of participating actors thereby economizing on the costs of co-ordination and decision-making. As each node joins the relevant nodal structure the costs of that linkage are outweighed by the benefits; however, at some point that will cease to be true. The information that new nodes bring will add little to information about enforcement, and the costs of co-ordination and decision-making will rise. There is, in other words, an optimum cluster of nodes for an enforcement pyramid.

The nodal structure for intellectual property has two important contingent features. First, there are a comparatively small number of nodes,
but these nodes represent networks, some of which contain many members, including many of the world's largest companies. What is being nodally coordinated then are large networks that are powerful in terms of information and resources. Second, the enforcement reach of this pyramid is genuinely global. This has much to do with the fact that the enforcement tools of the pyramid are based on access to the U.S. market, for the time being the most globally influential market in the world. But the nodal coordination of the pyramid itself increases its reach. For example, through the strategy of forum-shifting to bilaterals that was described earlier, the U.S. is able to set new and higher standards of intellectual property. Importantly, each of these bilaterals comes with a set of institutional arrangements for the enforcement of the agreement. Through the creation of new fora and standards that are TRIPS-plus enforcement activity under the pyramid can reach a greater number of standards in a greater number of countries. For instance, Article 6 of TRIPS says that for the purposes of dispute settlement nothing in TRIPS can be used to address exhaustion issues. But the U.S. can use FTAs to address the issue of exhaustion.

IV. Concluding Observations: The International Enforcement Pyramid and Global Rent-Seeking

States have, over the course of history, progressively learned the importance of securing the property rights of their citizens. States that, at the most basic level, cannot offer their citizens secure property rights are likely to experience no or little development because their citizens will devote the resources they have to defending the property they have, and there will be no incentive to accumulate more property, and foreign investors will be more likely to stay away. This relation between property and development takes the following simple sequence:

Sequence 1: Productive Property

property rights $\rightarrow$ enforcement $\rightarrow$ expectations of security $\rightarrow$ economic development

However, to assume what is true at a general level of the institution of property is true of all instances of property rules is to commit the fallacy of composition. It is not the case, for example, that all the feudalistic rules of tenure that English courts had to work with in the 17th and 18th centuries were efficiently defined, even if the institutional evolution of property was

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50 See, e.g., Australia FTA, supra note 14, at ch. 21.
51 BRAITHWAITE & DRAHOS, supra note 6, at 54.
key to England’s economic success.\textsuperscript{52} Property rules are not efficient per se but rather by virtue of their incentive effects in given institutional contexts. The rules of intellectual property are particularly difficult to design from the point of view of efficiency because they involve trading off one kind of efficiency for another. At base intellectual property rights involve the designer in interfering in the market’s capacity to diffuse and then aggregate information for the purposes of competition. For this reason the problem of unproductive property rights looms especially large in the case of intellectual property rights. The sequence below illustrates the idea of unproductive property.

\textbf{Sequence 2: Unproductive Property}

property rights $\rightarrow$ enforcement $\rightarrow$ expectations of security $\rightarrow$ under-development/inefficiency

In the past the problem of unproductive property rights was confined to national borders because sovereigns were only able to define property rules for the territory over which they were sovereign. One of the features of regulatory globalization has been that large U.S. corporations have proven to be the most recurrently effective actors in enrolling the power of states and of the most potent international organizations such as the WTO. These corporations have been primarily responsible for the globalization of intellectual property rules. They are, as we have seen, dealing with the critical problem of the enforcement of these rules by means of an international enforcement pyramid.

One clear danger of corporations being able to influence the definition and enforcement of intellectual property rights is that they will steer that definition and enforcement in directions that are profitable for them but unproductive for some or all states. An example of a property rule that is inefficient for all states is the extension of the copyright term to works already in existence. The extension of the copyright term can only have an incentive effect on future works, not works that are already in existence. These works have already been socially purchased by the copyright term that existed prior to the extension. In those cases where the copyright term extension applies to works about to fall into the public domain, the cost of continued monopoly pricing has to be worked out in present values rather than discounted future values. Both the U.S. and EU have gone down the path of copyright term extension.\textsuperscript{53} In recent preferential trade agreements

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\textsuperscript{52} See Peter Drahos, \textit{Regulating Property: Problems of Efficiency and Regulatory Capture}, in \textit{REGULATING LAW} 174-79 (Christine Parker et al. eds., 2004).

the U.S. is gaining copyright term extension as part of the deal.\textsuperscript{54} Even
taking into account the fact that the U.S. is, through copyright term
extension, changing the terms of trade of copyright works in its favor,
copyright term extension is still probably inefficient for the U.S. Aside
from the costs to consumers there are also dynamic efficiency losses that
flow from copyright term extension. When a copyright work enters the
public domain other creators no longer have to face the transaction costs of
locating copyright owners or having to pay for the use of the work. They
are free to adapt and innovate with those works. Famous copyright works
that enter the public domain are, in effect, cultural standards for which there
is high demand by both creators wishing to adapt them for their own
projects and consumers who wish to see the final product. The effect of
extending the copyright term for works, especially those in the category of
cultural standards, is to restrict the supply of cultural invention compared to
the supply had the works not been the subject of copyright protection.

In other cases a global property rule may be inefficient for only some
states. India’s success in building a strong pharmaceutical industry was
based in large measure upon its recognition of patents for pharmaceutical
processes, but not for pharmaceutical products.\textsuperscript{55} This is precisely the kind
of nuanced approach to the definition of property rights that TRIPS
prohibits. It obliges states to recognize patents on products and processes
in all fields of technology.\textsuperscript{56} The current thrust by the United States in
preferential trading agreements to restrict the capacity of states to issues
compulsory licenses for patents is also likely to be inefficient for many
states.

The actual impact of unproductive intellectual property rights in an
economy is an empirical matter and will depend on the particular industry
structure in which the relevant right begins to operate as well as the
economic capacity of the country to absorb the efficiency losses caused by
the property right. In short, the damage will vary. The more fundamental
issue is whether the system of nodal governance that has evolved for the
setting and enforcement of intellectual property rights will deliver more
Type 2 sequences than Type 1. This is not an issue for discussion here, but
it is important to see that the system of nodal co-ordination that has been
described in this paper is a form of central planning for intellectual property
rights. A historically decentralized system in which states, merchants and

\textsuperscript{54} The recent U.S.-Australia FTA extends the term of copyright in Australia from life of
the author plus 50 years to life of the author plus 70 years for works, performances and
phonograms. See Australia FTA, supra note 14, at art. 17.4.4. The extension applies to
copyright works in existence at the date of entry into force of the agreement. Id. at art.
17.1.9.

\textsuperscript{55} Assad Omer, Access to Medicines: Transfer of Technology and Capacity Building, 20

\textsuperscript{56} TRIPS, supra note 14, at art. 27(1).
custom were all sources of standard-setting for property rights is being replaced by centralized system of private nodal governance that draws upon public nodes of authority such as the USTR to legitimate and enforce its desired standards. The opportunities for rent-seekers have never been greater.