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CHAPTER ONE

Intellectual Property, Innovation and Development: The Access to Knowledge Approach

Lea Shaver

Few areas of law touch so closely upon our everyday activities – yet are so poorly understood – as intellectual property law. Consider this short quiz: Is it legal to make a photocopy of this eleven-page introduction to share with a colleague? To make a copy of the whole book? One chapter? What if your colleague lives in Canada? If you answered “I don’t know” at least once, chances are you are not alone.¹

If policymakers and the public find it difficult to understand how intellectual property (IP) rules work – respecting copyright, patents and other areas of intellectual property – it is all the more challenging to evaluate whether those rules work *well*. Even agreeing on the criteria by which to make this evaluation can be difficult, because our public discourse on IP often fails to ask the fundamental question: *What is the purpose of intellectual property?* The premise of this volume, of course, is that intellectual property law exists to promote innovation and human development. First and foremost, IP policy must be judged by how well it advances – or frustrates – these goals.

Intellectual property, innovation and development

If the twentieth century’s primary objects of trade were oil, steel and unskilled labor; the twenty-first century deals in information, technology and knowledge. Scholars and policymakers have used various labels to describe this new global reality: the information economy (Shapiro and Varian 1999, UNCTAD 2005), the knowledge economy (Drahoš and Braithwaite 2002, Mokyr 2002, World Bank 2005) or simply the New Economy (Castells 1996, OECD 2000). Regardless of terminology, however, no area of law has a more pervasive impact than intellectual property.

¹ The answer to all these questions is yes – if only because the authors, editor and publisher have released this volume under a Creative Commons license. See the copyright information page for further detail.

IP rules determine who may use and control the most important assets of this new economy, in what ways and with whose permission. Despite this fundamental importance, intellectual property law – and particularly its relationship to innovation and economic growth – remains poorly understood by most policymakers in both developed and developing countries. It is too often assumed that greater IP protection yields greater development, or that the number of patents filed can be taken as an indicator of underlying innovation. In fact, the relationship between intellectual property, innovation and development is much more complex.

The monopolies provided by intellectual property protections certainly provide incentives for innovation, but they are not the only or necessarily the best incentives (Maskus 2000, Gallini and Scotchmer 2002). Too much protection – particularly of the wrong kinds – can retard or stifle innovation. Important trade-offs also exist between IP protection and other desirable economic outcomes such as the wide and rapid diffusion of innovations and the existence of competitive markets. Such trade-offs also extend to outcomes less amenable to price tags; such as health, education, equality and freedom of expression. Much like tax policy, economists suggest, the optimal design of intellectual property protections requires careful balancing and tailoring (Nordhaus 1969).²

This is not, unfortunately, the approach predominantly reflected in IP law and policy today. To understand why, it is necessary to examine the concept of “rent-seeking,” first identified by economists in the 1960s and 1970s (Tullock 1967, Krueger 1974). This term refers to a situation in which a group of decisionmakers holds the power to transfer wealth from one individual or group to another, particularly through the creation of legal monopolies. Under such conditions, the theory predicts, market actors will invest enormous resources in lobbying those policymakers to create, preserve and extend such monopolies. The result is for governments to gradually expand intellectual property protections well beyond the levels that would be most beneficial to society as a whole (Landes and Posner 2003). The evolution of the

2 Although the term “intellectual property rights” dominates public discourse on patents, copyrights and trademarks, I prefer the more neutral term “intellectual property protections.” The language of “rights” connotes those entitlements that are inherent in the dignity of the human person and can never be surrendered. In contrast, intellectual property claims are time-limited and alienable, they may be bought or sold, and may be registered by corporations as well as individuals. It may be preferable, in fact, to speak of “intellectual property privileges” to underscore the original understanding of these legal monopolies on knowledge as a temporary license, established for the benefit of the public.

international IP regime reflects the influence of these rent-seeking pressures (Sell and May 2001, Drahos and Braithewaite 2002, Grandstand 2006).

Efforts to regulate intellectual property at the international level began in 1883 with the Paris Convention for the Protection of Industrial Property. Through this treaty, the eleven member countries agreed to abstain from discrimination against the others' nationals in registration of intellectual property claims. From this humble beginning, the international IP regime has expanded to include nearly every country in the world. In addition to these original principles of nondiscrimination, the treaties administered by the World Intellectual Property Organization (WIPO) now strictly define the substantive terms of intellectual property policy as well. These treaties embody an IP-maximalist logic, specifying minimum protections in many areas, while making no effort to impose any limits. The World Trade Organization's 1994 Agreement on Trade-Related Aspects of Intellectual Property (TRIPS Agreement) further entrenched international commitment to uniformly high levels of IP protection (WTO 1994). According to one legal scholar, these rules reflect the misguided notion that "One size fits all. And it is 'extra large'" (Boyle 2004, 4).

Access to knowledge as movement and theory

The theory of rent-seeking does not predict that special-interest lobbies will always be successful in pushing for broader monopolies. Their efforts may be opposed by voices from civil society asserting the public interest over private ones and resisted by policymakers of sound judgment. Largely sidelined in the World Trade Organization's push toward the landmark TRIPS Agreement, these public interest advocates are now playing catch-up.

The first salvo in this battle came in from activists fighting to expand access to anti-retroviral medicines (ARVs) in the late 1990s. With tens of millions of HIV-positive people worldwide, no situation better illustrated the cruel ironies of an innovation system that would produce life-saving discoveries, but then fail to make them available to most of the world.³ Over time, the access-to-medicines activists were joined by other groups with common

3 Approximately 40 million people worldwide are HIV-positive, including nearly 2.5 million children (UNAIDS 2006, 1). Almost two-thirds of those affected live in Sub-Saharan Africa (*ibid.*, 2). Total health care expenditures in this region – both public and private – average \$13 per person annually, excluding South Africa (World Bank 2005, 136). In contrast, governments and consumers in developed countries spend an average of \$2735 per person annually on health (*ibid.*). From a market perspective, Sub-Saharan demand for these medicines is insignificant.

interests in the commons (Boyle 2003). These included farmers in the developing world concerned about rights over seeds, educators concerned about access to learning materials and even software developers disturbed by the expansion of patents to computer code. Gradually, a loose movement has emerged under the banner of “access to knowledge” (Kapczynski 2008).⁴

The strongest expression of this growing movement is an insurrection of sorts within the World Intellectual Property Organization (WIPO). In 2004, these voices succeeded in prompting a call for a new WIPO Development Agenda that would redefine the institution’s mission to consider IP regulation as a means toward the end of equitable development, rather than as an end in itself (WO/GA/31/11 2004). As approved by the WIPO General Assembly in 2007, the 45 Adopted Recommendations under the Development Agenda specifically invoke the language of “access to knowledge” as a goal to be promoted by balanced intellectual property policies (WIPO 2007, Recommendation 19).

As used by these public-interest advocates, the concept of access to knowledge communicates something much broader than access to education and opportunities for learning. Within this framework, the term “knowledge” is understood to broadly refer to data, information, tools, inventions, literature, scholarship, art, popular media and other expressions of human inquiry and understanding. The demand for “access” is also broadly intended – pertaining not only to the right to access these products as consumers, but also the right to participate as producers in their creation, manipulation and extension.

Thus far, scholarship on access to knowledge has primarily articulated this concept within the frame of economic development (Benkler 2006, Balkin 2006, Shaver 2008). This frame emphasizes the broad economic benefits that may be achieved by promoting greater access to knowledge. This is also the frame primarily used by the access to knowledge movement, notably in the WIPO Development Agenda. There is also great potential, however, to advance access to knowledge claims within the international human rights framework. The 1948 Universal Declaration of Human Rights states: “Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement

4 For a comprehensive listing of the demands of this movement, readers should consult the movement’s proposed *Draft Treaty on Access to Knowledge*, located at http://www.cptech.org/a2k/a2k_treaty_may9.pdf.

and its benefits” (UDHR, Art.27). This is precisely the claim of the access to knowledge movement.

For some, support for the access to knowledge movement reflects skepticism of capitalism’s ability to innovate the solutions humanity needs most – such as low-cost health interventions and improved seeds suited to conditions in the global South. For others, access to knowledge represents a way to unlock trapped economic value, which may lead to new and expanded business opportunities. From both perspectives, the access to knowledge movement is a reaction against “intellectual enclosure,” seeking to reclaim things that were once treated as part of the common heritage of humanity, before they were converted into private property (Boyle 2003). Access to knowledge is a demand for democratic participation, for global inclusion and for economic justice.

The role of research for access to knowledge

Although a growing body of groups are now advocating for the public interest in intellectual property regulation, the amplification of these voices in the marketplace of ideas is still very skewed. Rent-seeking lobbyists have invested in spreading the doctrine of IP maximalism not only among elected officials, but also among national and international bureaucrats and even in legal scholarship. This perspective remains conventional wisdom in policymaking circles, the dominant approach against which civil-society advocates for the public interest must struggle to be heard.

This battle of ideas is not merely a political one, however. The optimal design perspective suggests that rigorous empirical research is a necessary foundation for the proposal of better policies. Yet research to conceptualize and investigate the economic and legal issues confronting intellectual property reform is still at an early stage. A number of scholars are already doing important work in this field (e.g. Boyle 1997, Fisher 2001, Helfer 2003, Sell 2003, Jaffe and Lerner 2004, Reichman and Maskus 2004, Drahos 2005, Lessig 2005, Benkler 2006, Chon 2006, Sunder 2006, Netanel 2008, Deere 2009, Dinwoodie and Dreyfuss 2010, Okediji 2010). There is a need, however, for even greater efforts to be invested and for this scholarship to become more geographically diverse. The countries of the global South have a very different history of intellectual property regulation and a very different reality of intellectual property enforcement. These contexts offer

a perspective from which to identify both challenges and opportunities that might be overlooked by Northern scholars.

It is with these goals in mind that the Information Society Project at Yale Law School has undertaken to develop a new series of research on access to knowledge in comparative perspective. Each volume in this series features original research by scholars from the global South, analyzing access to knowledge policy challenges from a national perspective. The goal is to document both success stories and challenges in information policy design that may inform global debates and offer lessons for similarly situated countries.

The contributions of this volume: a preview and themes

This first volume in the series features the contributions of an exemplary team of scholars from the Fundação Getulio Vargas law schools in Rio de Janeiro and São Paulo. The chapters that follow examine the themes of intellectual property, innovation and development through essays on four topics: open business models, exceptions and limitations to copyright, open innovation in biotechnology, and pharmaceutical patents and access to medicines.

The volume begins with an examination of the emergence of open business models – entrepreneurial strategies that take advantage of the ease of digital reproduction to distribute free content, while earning money from the sale of related products and services. Locating the origins of open business in the open source software phenomenon, the authors suggest that the business strategies innovated there have broader economic relevance. Through a case study of the *tecnobrega* music scene in Belém, the authors illustrate how open business models can be applied to the production of cultural materials more generally. As will be seen, such models not only enable wider access to cultural materials but may also promote broader participation in creativity, a more vibrant cultural scene and expanded opportunities for small entrepreneurs. Significantly, the *tecnobrega* example demonstrates that open business models can emerge not only around a cultural commons created through legislation and licensing, but also around a commons created by social norms alone. Greater legislative and licensing efforts are still desirable, the authors argue, to legalize these social commons and create greater room for open business to flourish.

The second chapter examines exceptions and limitations to copyright. Under the terms of the Berne Convention and TRIPS Agreement, member

countries are required to enforce copyright on all works for the author's lifetime plus at least fifty years. These treaties leave room, however, for national legislatures to create exceptions and limitations to these general rules – defining specific circumstances in which users may copy, share or modify a work without obtaining the rightsholder's specific consent. The first chapter examines these user rights in the Brazilian legal context. Through a review of the statutory law and two case studies, the authors illustrate how copyright can make it difficult to access scholarship and cultural materials, particularly in developing countries. Statutory exceptions and limitations can play a vital role in alleviating some of these harms and restoring balance to copyright law. The authors conclude, however, that Brazil's exceptions and limitations are currently too limited to fulfill this important role. To achieve reform, they suggest, policymakers and legal scholars must begin to approach copyright regulation as part of broader information and cultural policy, promoting the interests of the public alongside those of authors and publishers.

A third chapter analyzes Brazil's efforts to stimulate development in an emerging biotechnology sector. The immense genetic diversity of Brazil's rainforests may hold the raw materials for countless technological innovations in medicine, agriculture and beyond. The country must still determine, however, what property arrangements should govern this vast natural inheritance. Through a case study of the ONSA Network's Genoma Program, the author demonstrates that collaborative, open approaches can be particularly beneficial to advancing innovation in developing country contexts. Drawing on the literature of the tragedy of the anticommons, the author suggests that Brazil would do well to reject calls for greater IP protection in the field of biotechnology, particularly proposals for patents on genetic sequences. Rather, an encouragement of open innovation is more likely to accelerate development in this field.

Intellectual property policy not only influences the pace of scientific innovation, but also the affordability of the products ultimately derived from that innovation. The final chapter in this volume illustrates this lesson by examining the impact of pharmaceutical patents on access to medicines in Brazil. Prior to 1996, Brazilian law did not recognize patents on pharmaceuticals. The manufacture of inexpensive generic medicines facilitated the creation of a national health system in which every Brazilian was promised a modern standard of care. Since reforming its intellectual

property law to comply with TRIPS, however, Brazil has seen its public spending on medicines dramatically increase. This acute financial pressure is now pushing the nation's courts to redefine the constitutional right to health more narrowly than before. Through a careful policy analysis, the authors reveal both what mistakes were made as Brazil implemented the TRIPS Agreement, and what opportunities exist to correct them.

Taken together, these four perspectives ably illustrate the importance of access to knowledge for both innovation and development. Intellectual property regulation is shown to play a crucial role in research and innovation – a role much more complex than conventional wisdom may suggest. IP law can dramatically affect the government's ability to provide public goods – ranging from health care to education. Intellectual property law also has important implications for market competition; more open approaches may favor small entrepreneurs offering new products and services. And in the area of copyright, IP regulation has strong implications for democratic and cultural freedom, education and freedom of expression. These studies thus offer important reading for policymakers, legal scholars and the public, in Brazil and beyond.

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Bibliography

- Balkin, Jack. 2006. What is Access to Knowledge? *Balkinization*, Apr. 21. <http://balkin.blogspot.com/2006/04/what-is-access-to-knowledge.html>.
- Benkler, Yochai. 2006. *The Wealth of Networks: How Social Production Transforms Markets and Freedom*. New Haven/London: Yale University Press. http://cyber.law.harvard.edu/wealth_of_networks/Main_Page.
- Boyle, James. 2008. *The Public Domain: Enclosing the Commons of the Mind*. New Haven: Yale University Press. <http://www.thepublicdomain.org/download/>.
- Boyle, James. 2004. A Manifesto on WIPO and the Future of Intellectual Property. *Duke Law and Technology Review*, vol. 9, pp. 1–12. <http://www.law.duke.edu/journals/dltr/articles/PDF/2004DLTR0009.pdf>.
- Boyle, James. 2003. The Second Enclosure Movement and the Construction of the Public Domain. *Law and Contemporary Problems*, vol. 66, pp. 33–74. <http://ssrn.com/abstract=470983>.
- Boyle, James. 1997. A Politics of Intellectual Property: Environmentalism for the Net? *Duke Law Journal*, vol. 47, pp. 87–116. http://www.law.duke.edu/boylesite/Intprop.htm#N_1_.
- Castells, Manuel. 1996. *The Rise of the Network Society*. Cambridge, MA and Oxford: Blackwell Pub.
- Chen, Derek H.C. and Carl J. Dahlman, 2005. The World Bank's KAM Methodology and Operations. Oct. 19. Institute Working Paper No. 37256. <http://ssrn.com/abstract=841625>.
- Chon, Margaret. 2006. Intellectual Property and the Development Divide. *Cardozo Law Review*, vol. 27, pp. 2821–2912. <http://ssrn.com/abstract=894162>.
- CIPR. 2002. *Integrating Intellectual Property Rights and Development Policy: Report of the Commission on Intellectual Property Rights*. London. http://www.iprcommission.org/graphic/documents/final_report.htm.
- Deere, Carolyn. 2009. *The Implementation Game: The TRIPS Agreement and the Global Politics of Intellectual Property Reform in Developing Countries*. Oxford University Press.
- Dinwoodie, Graeme B. and Rochelle Cooper Dreyfuss. 2010. *Achieving Balance in International Intellectual Property Law*. Forthcoming: Oxford University Press.
- Drahos, Peter. 2005. An Alternative Framework for the Global Regulation of Intellectual Property Rights. *Austrian Journal of Development Studies*, no. 1, Oct. <http://ssrn.com/abstract=850751>.
- Drahos, Peter and John Braithwaite. 2002. *Information Feudalism: Who Owns the Knowledge Economy?* London: Earthscan.
- Fisher, William. W. III. 2001. Intellectual Property and Innovation: Theoretical, Empirical, and Historical Perspectives. In: *Industrial Property, Innovation, and the Knowledge-based Economy, Beleidsstudie Technologie Economie*, vol. 37. <http://cyber.law.harvard.edu/people/tfisher/Innovation.pdf>.
- Gallini, Nancy and Suzanne Scotchmer. 2002. Intellectual Property: When is it the Best Incentive Mechanism? *Innovation Policy and the Economy, Vol 2* (eds. Adam Jaffe, Joshua Lerner and Scott Stern) pp. 51–78. Cambridge, MA: MIT Press.
- Grandstand, Ove. 2006. Innovation and Intellectual Property Rights. *The Oxford Handbook of Innovation* (eds. Jan Fagerberg, David C. Mowery and Richard R. Nelson) pp. 266–290. Oxford University Press.

- Helfer, Lawrence. 2003. Human Rights and Intellectual Property: Conflict or Coexistence? *Minnesota Journal of Law, Science & Technology*, vol. 5, p. 47. <http://ssrn.com/abstract=459120>.
- Jaffe, Adam B. and Joshua Lerner. 2004. *Innovation and Its Discontents: How Our Broken Patent System is Endangering Innovation and Progress, and What to Do about It*. Princeton, NJ: Princeton University Press.
- Kapczynski, Amy. 2008. The Access to Knowledge Mobilization and the New Politics of Intellectual Property. *The Yale Law Journal*, vol. 117, pp. 804–885. <http://yalelawjournal.org/images/pdfs/642.pdf>.
- Krueger, Anne O. 1974. The Political Economy of the Rent–Seeking Society. *The American Economic Review*, vol. 64, no. 3, pp. 291–303. <http://www.jstor.org/stable/1808883>.
- Landes, William M. and Richard A. Posner. 2003. *The Political Economy of Intellectual Property Law*. Washington, DC: AEI–Brookings Joint Center for Regulatory Studies.
- Lessig, Lawrence. 2008. *Remix: Making Art and Commerce Thrive in the Hybrid Economy*. London: Bloomsbury Academic. <http://www.bloomsburyacademic.com/pdf%20files/Remix.pdf>.
- Lessig, Lawrence. 2005. *Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity*. Harmondsworth: Penguin.
- Maskus, Keith E. 2000. *Intellectual Property Rights in the Global Economy*. Washington, DC: Institute for International Economics.
- Mokyr, Joel. 2002. *The Gifts of Athena: Historical Origins of the Knowledge Economy*. Princeton University Press.
- Netanel, Neil Weinstock (ed.). 2008. *The Development Agenda: Global Intellectual Property and Developing Countries*. Oxford University Press.
- Nordhaus, William D. 1969. *Invention, Growth and Welfare: A Theoretical Treatment of Technological Change*. Cambridge, MA: MIT Press.
- OECD (Organization for Economic Cooperation and Development). 2000. *A New Economy? The Changing Role of Innovation and Information Technology in Growth*. OECD Publishing.
- Okediji, Ruth. 2010. *Global Perspectives on Intellectual Property Law*. Forthcoming: Oxford University Press.
- Reichman, Jerome H. and Keith E. Maskus. 2004. The Globalization of Private Knowledge Goods and the Privatization of Global Public Goods. *Journal of International Economic Law*, 7(2), pp. 279–320. [http://eprints.law.duke.edu/1195/1/7_JIEL_279_\(2004\).pdf](http://eprints.law.duke.edu/1195/1/7_JIEL_279_(2004).pdf).
- Sell, Susan and Christopher May. 2001. Moments in Law: Contestation and Settlement in the History of Intellectual Property. *Review of International Political Economy*, vol. 8, iss. 3, pp. 467–500.
- Sell, Susan K. 2003. *Private Power, Public Law: The Globalization of Intellectual Property Rights*. Cambridge University Press.
- Shapiro, Carl and Hal R. Varian. 1999. *Information Rules: A Strategic Guide to the Network Economy*. Cambridge, MA: Harvard Business Press.
- Shaver, Lea Bishop. 2008. Defining and Measuring A2K: A Blueprint for an Index of Access to Knowledge. *I/S: A Journal of Law and Policy for the Information Society*, vol. 4, no. 2, pp. 235–272. <http://ssrn.com/abstract=1021065>.

- Sunder, Madhavi. 2006. IP³. *Stanford Law Review*, vol. 59, pp. 257–332. <http://ssrn.com/abstract=897753>.
- Tullock, Gordon. 1967. The Welfare Costs of Tariffs, Monopolies and Theft. *Western Economic Journal*, vol. 5, pp. 224–232.
- UNAIDS. 2006. *AIDS Epidemic Update: December 2006*. Geneva: UNAIDS. http://data.unaids.org/pub/EpiReport/2006/2006_EpiUpdate_en.pdf.
- UNCTAD. 2005. *Information Economy Report 2005*. Geneva: United Nations. http://www.unctad.org/en/docs/sdteecb20051_en.pdf.
- WIPO (World Intellectual Property Organization). 2007. The 45 Adopted Recommendations under the WIPO Development Agenda. <http://www.wipo.int/ip-development/en/agenda/reommendations.html>.
- WO/GA/31/11. 2004. Proposal By Argentina and Brazil for the Establishment of a Development Agenda. August 27, 2004. http://www.wipo.org/documents/en/document/govbody/wo_gb_ga/pdf/wo_ga_31_11.pdf.
- World Bank. 2005. *Improving Health, Nutrition, and Population Outcomes in Sub-Saharan Africa: The Role of the World Bank*. Washington, DC: World Bank Publications. <http://books.google.com/books?id=7SBc6c-v6G4C>.
- World Bank. 1999. *World Development Report 1998/99: Knowledge for Development*. <http://www.worldbank.org/wdr/wdr98/overview.pdf>.
- WTO (World Trade Organization). 1994. Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). Annex 1C, Marrakesh Agreement Establishing the World Trade Organization. 15 April 1994. http://www.wto.org/english/docs_e/legal_e/legal_e.htm#TRIPs.

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