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Access to Knowledge

From development to human rights

Lea Shaver

The present book is the third in a series of edited volumes featuring original research on the theme of access to knowledge, each title approaching this common subject from the vantage point of a particular country. The idea for this project was born in New Haven, at the Information Society Project at Yale Law School, and specially nurtured by Jack Balkin and Laura DeNardis. With funding from the MacArthur Foundation, a multi-year initiative was launched to stimulate and support original research by scholars from seven countries in the global South. Through a series of meetings and workshops, the participating authors benefitted from and built upon each other's insights. In the process, a view of access to knowledge and its challenges has emerged that is many times richer and more complicated than the initial vision from which we had started.

Prior volumes in the Access to Knowledge series focused on the situations of Brazil and Egypt, respectively.¹ This third volume continues the focus on the unique challenges and opportunities observed in the context of developing countries. *Access to Knowledge in India* features contributions from both well-established and rising scholars. Examining topics ranging from the pharmaceutical industry to the role of libraries, from agricultural innovation to traditional knowledge and rural Internet access, these authors make an important contribution not only to their particular fields of research but also to the emerging body of scholarship on access to knowledge generally. This has ripened into a truly international conversation, as is entirely appropriate given the broad importance of these concerns and the increasing tendency towards their global regulation.

In this introductory chapter, I aim to provide an orientation to the concept of 'access to knowledge' as well as to preview the contributions of the later chapters. This book begins with a basic introduction and then weaves in the insights and arguments of the following chapters. From this endeavour, a picture emerges of access to knowledge as a critical factor in economic growth and also as an aim in its own right through the lens of human development.

In addition to this introductory role, this chapter also aims to develop a particular argument of my own – in favour of a broader role for courts in vindicating access to knowledge concerns. Specifically, I argue that constitutional courts must explicitly acknowledge and work to resolve the tension between socioeconomic rights and intellectual property (IP) law. These tensions are, I suggest, much broader and more systematic than has heretofore been acknowledged. Introducing a human rights analysis can help reform a regulatory system that has been greatly abused and distorted to serve private interests at great cost to public ones.

Such a rights-based review could in theory be pursued by any number of national courts and international organizations. I believe, however, that the unique character of Indian constitutional litigation today – embracing socioeconomic rights and judicial innovation – offers a particularly promising opportunity to develop this type of case law. It is my hope that this book may serve as stimulus for a broader national and international enquiry into the challenge of access to knowledge and the role of the law in helping to meet it.

The access to knowledge perspective

Knowledge can come in many forms, including inventions, ideas and information. In all its forms, knowledge is not merely of intellectual interest. It is also useful in very practical ways. Knowledge can make people healthier, as when new scientific data drives a doctor to recommend a different treatment or when new and more effective medicines are introduced. Knowledge can provide new opportunities, as when communications technology helps a small businessperson or farmer sell his or her goods for a fairer price, or a textbook or website helps a student acquire new and useful skills. Even forms of knowledge that are primarily designed for entertainment – such as music, novels and movies – are part of a shared culture that connects us as a society and adds meaning to our lives.²

To a great extent, everything that makes our lives better depends on innovation, ideas and information. Quite often, the law treats such knowledge as the exclusive property of a particular individual or corporation. It gives a single owner the right to prevent anyone else from having access to use and benefit from it, sell goods based on it or improve upon it. This legal right to exclude enables the owner to charge others for access to the knowledge. Often, the price will be very expensive because the right holder can also exclude potential competition. The resulting higher prices are not an accident or unwelcome side effect of intellectual property protection. They are the very point. In theory, these higher prices will motivate greater production of knowledge than would have occurred in a more competitive market.

The access to knowledge perspective asks a simple question that is long overdue in intellectual property law and policy: As innovation progresses, who is able to benefit from it and who is not? What is the role of the law in determining who gets in the door and who is left outside? And might not these barriers to access actually have a negative impact, not only on those individuals who cannot afford the higher prices but also on economic growth and future innovation? It is in its diffusion and application that innovation achieves its social impact. This has an obvious importance for social welfare when we are talking about forms of knowledge that can make us healthier, better educated or more secure. The wide and rapid spread of knowledge also has a very important impact on economic growth. If businesses are slow to gain access to new technologies, ideas and information, this limits their productive potential. From the perspective of the public good, then, wide and rapid diffusion is essential.

But from the perspective of the person holding the intellectual property right, diffusion may or may not be a priority. For some innovations, pursuing rapid diffusion – offering the new product at an affordable price and seeking a large market – will make perfect business sense. For others, the right holder may see an advantage in restricting diffusion, charging a premium to a smaller pool of customers. In certain sectors, the right holder may realize that they can charge exorbitant fees and count on insurers or taxpayers to foot the bill. When this happens, intellectual property protection is in tension with the public interest in diffusion. It then becomes very important to ask whether our intellectual property policy is striking the right balance between business incentives and broader access.

The scholars, activists and policymakers affiliated with the access to knowledge movement are united in large part by their shared conviction that we have not appropriately balanced these concerns.³ Rather, law and policy have swung far too far in the direction of excessive protection, serving private interests rather than public ones. A restored balance can only be achieved by a greater recognition of and emphasis on the value of access to knowledge. Thus far, the argument for legal reform to promote access to knowledge better has been directed primarily within the framework of development and trade. I suggest that it is time we supplemented this approach with a complementary one: taking seriously the importance of access to knowledge for human rights. This implies also recognizing a role for courts in promoting and defending these rights in the face of misguided intellectual property protectionism.⁴

Pharmaceutical patents and the right to health

Perhaps the most obvious intersection of intellectual property and human rights appears in the context of pharmaceutical patents and the right to health. From the Indian perspective, the tension between patent protection and affordability

of health care is particularly evident. Any discussion of access to knowledge as a human right would do well to start from this point.

In their jointly authored chapter for *Access to Knowledge in India*, Chan Park and Arjun Jayadev examine the impact that newly heightened intellectual property protections have had on India's role as 'the pharmacy of the developing world'. The 2005 Patent (Amendments) Act was enacted to implement India's international obligations under the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS). These amendments reintroduced patent protection for pharmaceutical compounds in India for the first time since 1972. The Act also responded, however, to concerns expressed by civil society groups opposed to TRIPS about the impact of pharmaceutical patents on access to medicines.

Park and Jayadev document the unique successes of India's legislature in taking maximum advantage of the optional flexibilities available under the World Trade Organization (WTO) regime. India's implementing legislation set stricter substantive standards for obtaining pharmaceutical patents than those adopted by most other countries. It also enacted a number of new procedural safeguards, including patent opposition procedures, that may be utilized by generic drug companies as well as by public interest advocates.

For pharmaceutical companies, enormous potential profits are at stake in the implementation of these rules; for some patients, life itself may be at stake. Thus, it should come as no surprise that the Patents Act would become the focus of important litigation. According to Park and Jayadev, these cases are establishing 'a unique line of Indian jurisprudence that injects fundamental public health considerations into how patent law should be interpreted'. The Madras High Court upheld the constitutionality of a key statutory limitation on drug patents, noting the government's 'Constitutional obligation of providing good health care to its citizens'.⁵ The Delhi High Court refused to grant an interim injunction against the off-brand marketing of a life-saving drug as inconsistent with the constitutional right to life of patients.⁶ The Delhi Patent Office, too, has recognized the value to 'give a strict interpretation of patentability criteria, as decision ... thereof shall affect the fate of people suffering from HIV/AIDS for want of essential medicine'.⁷

As Park and Jayadev take care to highlight, these cases do not represent the invocation of human rights to directly challenge intellectual property laws. Rather, they treat the right to health as a factor guiding the interpretation and application of the legislature's patent statute. It is thus far from clear that courts would have the stomach to defend the right to health by striking down 'TRIPS-plus' legislation, such as new protections for data exclusivity⁸ or by mandating better administrative procedures for the issuance of compulsory licences – an option preserved under the 2005 Amendments but not yet effectively deployed. Meanwhile, a robust consideration for the right to health even in these limited contexts depends on the continued active advocacy of public health organizations. In this process, the authors suggest there is a danger that these

venues subsume the movement's energy for a deeper critique of pharmaceutical patents that is still very much needed. They also point out the instability of this uniquely Indian jurisprudence in the context of a broader, and perhaps unwise, reliance on British patent case law as a source of precedent.

Whatever its limitations, Indian jurisprudence on access to medicines is well ahead of the global curve in explicitly confronting the tension between pharmaceutical patent protection and the right to health. This may be seen by a comparison with jurisprudence in two other countries with sizeable generics industries: Brazil and Egypt. Here, I draw upon chapters contributed to the earlier volumes, *Access to Knowledge in Brazil* and *Access to Knowledge in Brazil*.⁹

Brazilian courts have long recognized a right to medicines as part of the constitutional right to health. So far, however, they have failed to draw a connection between this right and patent jurisprudence.¹⁰ Traditionally, the Brazilian constitutional right to health has been guaranteed by the universal, free provision of medicines through the national health care system.¹¹ After Brazil introduced pharmaceutical patent protection post-TRIPS, however, drug prices increased dramatically.¹² Increasingly, Brazilian public health agencies have responded by rationing essential medicines, prompting patients to resort to the courts.¹³

For more than a decade, Brazilian courts overwhelmingly ruled on these cases by ordering provision of the medicines, holding that the right to health requires universal access to medicines and cannot yield to bureaucratic cost-savings rationales.¹⁴ The Brazilian case law thus stands in stark contrast to the logic of the South African Constitutional Court in *Soobramoney*.¹⁵ As Guise *et al.* detail, however, this line of jurisprudence may well not be sustainable in an era of much higher drug prices.¹⁶ Recent decisions of Brazil's highest court have upheld some denials of medicines and reflect a struggle over whether to endorse cost-based rationing.¹⁷ The solution, of course, lies in turning judicial attention from review of individual administrative decisions to the larger, structural questions: addressing the problematic patent rules that led to the unaffordable drug prices.¹⁸ The Brazilian courts, however, have yet to follow India's example in this respect.

Egyptian jurisprudence offers a second point of contrast. In *Access to Knowledge in Egypt*, Bahgat and Wright surveyed the courts' recent case law on pharmaceutical patents.¹⁹ Here, too, broad access to affordable medicines has been threatened by rising costs in the wake of TRIPS reforms.²⁰ Bahgat and Wright conclude that Egyptian courts have been reasonably strong in recognizing the implications of patent law for access to medicines.²¹ So far, however, Egypt's courts have been hesitant to invoke explicitly a human rights framework. Bahgat and Wright argue that a rights-based foundation is urgently needed for Egyptian jurisprudence and policy to rise to the task of ensuring access to medicines.²² Certainly, the future prospects for this jurisprudence will be much influenced by Egypt's current process of constitutional reform.

Education: from libraries to the Internet

Access to knowledge is not only a question of patent law, however. The broader scope of this framework may be highlighted by considering two additional aspects of access to knowledge explored in the forthcoming volume: the role of public libraries and efforts to close India's digital divide.

In a chapter exploring the history and future of India's public libraries, Prashant Iyengar seeks to step back from the access to knowledge movement's predominant preoccupation with intellectual property and communications technologies. If the task of access to knowledge is merely to ensure the widest dissemination of an unproblematic, unquestioned good, then surely the library is its highest symbol. But libraries themselves, Iyengar reminds us, have been the site of political contestation and negotiation over key questions of social justice, economic development and human liberty. Despite their grounding in a democratic ethos, the author argues, public libraries remain 'vigorously controlled sites' where a 'privileged clientele' is permitted to access 'approved' knowledge only. India's readers, of course, seek to satisfy their appetites in less-approved venues as well, giving rise to a thriving market in pirated books. Examining these conflicts in broad historical perspective, Iyengar asks what lessons may be offered for modern ambitions to promote access to knowledge.

Iyengar also contextualizes the public library, as the first in a line of technologies endorsed by the state, as a means for formal education and lifelong learning. The radio and television were each hailed in their time for their revolutionary educational potential. Of course, Iyengar reminds us, each proved 'spectacularly successful as mediums of entertainment' but ultimately failed to achieve its higher minded social goals.

Will this be the fate of the Internet in our own time? Such an outcome is suggested by the case of one market-based rural Internet initiative, detailed in Chapter 5 in this book. TeNeT began with considerable investment and lofty ambitions for advancing rural development through tele-medicine, crop advice and vocational training. Within three years from start-up, more than 3,000 franchises had been sold to kiosk operators. Today, however, the network has collapsed to as few as 100 centres still operating, and many of these at a loss. Video games and email have emerged as the predominant use of the technology, but the kiosks have not been profitable enough to sustain themselves. According to the company's CEO, the missing ingredient is valued content – the application side of the technology.

Not coincidentally, the content side of the equation emerges as a key strength of the more successful case study described in Chapter 5 by Subramanian. This model is the M. S. Swaminathan Research Foundation's Village Knowledge Centre initiative. Although the provision of information and communications technology (ICT) is a central component, the project is self-consciously defined in terms of what distinguishes it from a standard Internet kiosk. This vision

emerged from an earlier effort by the foundation that was focused on the collection, curation and dissemination of traditional knowledge. The Village Knowledge Centre model emphasizes centralized, active collection and editing of ideas and information relevant to the village context and of particular importance for human development. Topics include farming techniques, weather, government news, job and aid opportunities, loans, maternal health and hygiene, and educational accreditation. To disseminate this information to villagers, the programme has developed an infrastructure that emphasizes the human and community aspects as much as the technological. Subramanian reports that the Village Knowledge Centres are widely used, are valued by the community members and particularly benefit women and children.

Juxtaposing the contributions of Subramanian and Iyengar, it is tempting to conclude that the Village Knowledge Centres in fact represent an ideal model for the modern library. To be sure, the book itself has been marginalized here – in favour of the newsletter, radio address and instructional video – in a way many bibliophiles would deem scandalous. This model is responsive, however, to the criticism of Sarah Kamala that public libraries have catered to the recreational reading needs of a small elite, with books largely irrelevant to the lives of rural people, while completely ignoring the illiterate. In its emphasis on locally relevant knowledge, community management and transformative impact on community relations, the Village Knowledge Centre model comes close to the ideal of S. R. Ranganathan, profiled by Iyengar as a pioneer in Indian library science. A 1933 quotation of Ranganathan, highlighted by Iyengar, emerges as both relevant and prescient: ‘Who knows that a day may not come ... when the dissemination of knowledge, which is the vital function of libraries, will be realized by libraries even by means other than those of the printed book!’

Iyengar also reminds us that the library should be viewed within the broader ecology of access to content. During the golden age of India’s public libraries, support and use of the institutions were high because the domestic printing industry was almost non-existent and foreign books were extremely expensive, even by the standards of the middle and upper classes. The comparative neglect of public libraries today may reflect their receding relevance, Iyengar notes, as privately acquiring books has become much more affordable. Towards this end, the author highlights competition among low-cost printers, lax copyright restrictions and a substantial grey market for pirated copies. The last is crucial. In Iyengar’s words, ‘it is the pirate industry that shows India up as a nation of voracious readers constantly endeavouring, against odds, to educate itself’. While commending the open access movement for lowering copyright barriers to certain materials, the author pushes us to resist the temptation to assume that the material produced and valued by the elite is the material that matters. Abstract notions of development, education and public benefit would do better, he suggests, to reckon with the real force of what people actually want and find useful.

Management of agricultural and traditional knowledge

The strength of the access to knowledge perspective has been in challenging the prevailing paradigm of intellectual property protectionism. Giving producers stronger monopoly control over information-embedded products, these critics note, does not necessarily result in more effective incentives.²³ The framing of access to knowledge highlights the costs of such unnecessary protection to values of inclusion and equity as well as competition and innovation. The access to knowledge paradigm also comes with weaknesses, however. Access to knowledge cannot merely be about eliminating intellectual property barriers, in the assumption that a more competitive marketplace will meet all our needs. Still less can we be content with ‘access’ in some passive sense of merely consuming already produced knowledge. Rather, our goal should be to empower broad sectors of society to participate not only as consumers of knowledge but also as coproducers. This in turn requires a greater reflection into the ways that knowledge is produced, shared and appropriated in our society.²⁴ In this vein, two contributions of this volume work to complicate the concept of access to knowledge and situate the true complexity of the task.

Chapter 6 by Kumar *et al.* explores these topics in the context of agricultural knowledge in India. It begins with the observation that despite the special importance of knowledge for improving agricultural yields and the special promise of the Internet as a vehicle for diffusing knowledge, very little relevant digital content exists. On YouTube, for example, how-to videos addressing farming techniques are vastly outnumbered by videos on cooking. Among those universities that have developed channels to share their knowledge in video format, none are agricultural universities. And although an agricultural science portal has been established within Wikipedia to encourage contributions to this field of study, coverage of even basic topics of agricultural science remains sparse and shallow. Conversely, current government efforts to diffuse agricultural knowledge have taken little notice of the potential of new communications technologies and Web 2.0 platforms. According to Kumar *et al.*, e-government and ICT4D initiatives have largely overlooked agriculture as a sector of potential. Formal agricultural extension centres remain the focus of agricultural improvement strategy, even as farmers report they acquire most information from their peers.

The contribution of Sudhir Krishnaswamy examines another type of knowledge management project: efforts to protect Indian traditional knowledge from ‘biopiracy’. This goal has been pursued through both defensive and offensive uses of intellectual property law. On the defensive side, public interest advocates have challenged patents taken by foreign corporations based on traditional knowledge. While prevailing in the particular cases, Krishnaswamy suggests that these legal victories have achieved more in publicity than in real impact. Broad, proactive efforts were also organized to document Indian

traditional knowledge in databases and archives, both to preserve it against loss for future generations and to prevent foreign patenting.²⁵ These defensive efforts sit easily with the perspective of access to knowledge, as their fundamental aim is to keep traditional knowledge in the public domain. In greater tension, however, are the offensive strategies. One such approach is to encourage Indian companies to pre-empt foreign ones by acquiring patents first. Another is the effort to design special legal regimes recognizing a collective property interest in traditional knowledge, which could then be licensed for fees. To Krishnaswamy, modern state regulation of knowledge resources implicates the same troubling dynamics of earlier state management of natural resources. The risk is that the logic of agency self-preservation overwhelms the conservation goal, while vulnerable communities obtain no real benefits. A key difference between management of knowledge and management of forests, of course, is that the former is an infinitely renewable resource. Transforming this resource into property to be bought and sold is not necessary to its conservation and, Krishnaswamy argues, risks an ossification of the very knowledge commons from which it emerged.

These two chapters on traditional knowledge and agricultural expertise highlight a few common pitfalls of innovation policy. One of these is to assume that the challenge of knowledge production can be left solely to markets. As Kumar *et al.*'s examples highlight, markets respond to perceived demand and ability to pay. A passing interest of wealthy American consumers in spicing up their cuisine with South Asian flavours will motivate greater market response than the urgent need of rural farmers to protect subsistence crops from ruinous disease. For this reason, markets systematically fail to deliver knowledge that truly has a transformative potential, an ability to reach the most vulnerable sectors of society and promote equity, rather than reinforce stratification. At the same time, government programs, despite the best of intentions, often fail in their missions. Too often, effectiveness at serving the poor becomes a secondary question, relegated to the background as an agency caters to more powerful unintended constituencies.

The right to science and culture

Taken together, the five chapters described here highlight the complex challenges involved in efforts to promote greater access to knowledge. Whether we look to health or education, agriculture or rural development, traditional knowledge or modern technologies, knowledge makes all the difference. Yet it is not enough to treat innovation in the abstract. Once new knowledge is brought into existence, its social impact will be determined by whether its wide diffusion is encouraged or restricted. Achieving the right balance in intellectual property policy is a

necessary, but not sufficient, element in a broader access to knowledge strategy. It is also important to take account of institutional, societal and market forces that shape the knowledge ecosystem. What is the role of the law in this endeavour? Is law merely the handmaiden of access to knowledge policy, charged with executing the plan once it is properly conceived? Or can legal principles also help to guide our understanding of the problem and our search for solutions?

I suggest that the latter is possible, through the framework of the right to science and culture. This right is recognized in the statement of Article 27 of the Universal Declaration of Human Rights: 'Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.'²⁶ In an earlier article, I offered a framework for understanding this little-studied and still-less-applied provision.²⁷ The text makes sense, I suggest, only when we appreciate that the treatment of media content and technological discoveries as market commodities is not inevitable but, in fact, highly political. Law and policy have a profound impact on whether inventions, ideas and information goods will be widely accessible or made artificially scarce. The right to science and culture is therefore best understood as expressing a commitment to preserve these varied forms of knowledge as a global public good. This commitment is grounded not only in a commitment to equality and inclusion but also on a recognition of the special character of knowledge as a resource that increases, rather than becomes depleted, the more widely it is shared. The purpose of this right is fundamentally at odds with the current direction of international intellectual property law, which pushes for ever greater privatization of knowledge.

Confronting this trend from the framework of the right to science and culture would have several advantages. Structurally, it provides a new legal foothold from which to push for sensible intellectual property reform. Courts and policy makers can 'stand on' human rights mandates in interpreting existing intellectual property treaty obligations and in opposing new ones. Rhetorically, it repositions the debate from one of mere national self-interest whereby each country seeks to obtain trade terms most favourable to its industries. It allows proponents of access and competition to take the moral high ground and focus attention on the public as beneficiaries of access and as rights claimants. Neither of these advantages is present in a framework that conceives of access to knowledge solely in terms of human development or economic growth. Recognition of the right to science and culture can go hand in hand with arguments based on other human rights, such as the rights to health, education and food. Its unique contribution, however, is to point the law away from a strategy of merely attempting to carve out limited exceptions to intellectual property protectionism in areas of special concern, such as pharmaceutical patents, to the need for broader, more fundamental legal reform. The framework of the right to science and culture may also help correct some of the rhetorical limits of the access to knowledge framework. The recognition of a right to

participate in cultural life (rather than merely consume copyrighted works) and to share in *the process* of scientific advancement (as well as in its benefits) emphasizes a more active role for individuals in the knowledge commons than might be presumed from the phrase ‘access to knowledge’.

Conclusion: a role for the courts

To be sure, realizing the right to science and culture is not a simple task. Government policy in the areas of education, culture, Internet governance, rural electrification, research and development, technological standards setting and procurement all have roles to play. It is no simple matter to determine the best approach, from a policy perspective, or to specify when a government’s failure to take access into account rises to the level of a violation of the right.

In certain contexts, however, the jurisprudential questions are simpler. This is particularly true where government action itself is a prominent barrier to enjoyment of the right, which judicial review can correct. This is the case, for instance, when intellectual property laws operate to impede wider access to new technologies or cultural content. Such laws should be treated as limitations on the right to science and culture – and other relevant rights such as health, education or food – and be carefully scrutinized. Not every limitation will necessarily constitute a violation of the right. Recognition that human rights are at stake, however, can serve to bring greater attention to countervailing public interests in the process of interpreting and applying intellectual property law.

Whether and how the right to science and culture may be actionable in India’s courts is a question best taken up by Indian jurists. The lead has already been taken, however, in the context of pharmaceutical patents and the right to health. With care and time, this may yet evolve into a broader rights-based approach capable of guiding national and international efforts on access to knowledge in a more positive direction.

Notes

Portions of this chapter are adapted from earlier essays of the author: “Intellectual Property and Social Justice: An Invitation,” published by New York Law School Law Review in 2011 and “Special Comment: Access to Knowledge in India” published by National Law School of India Review, also in 2011.

- 1 Nagla Rizk & Lea Shaver (eds), *Access to Knowledge in Egypt: New Research on Intellectual Property, Innovation and Development* (London: Bloomsbury Academic, 2010); Lea Shaver (ed.), *Access to Knowledge in Brazil: New Research on Intellectual Property, Innovation and Development* (London: Bloomsbury Academic, 2010).

- 2 See Lea Shaver & Caterina Sganga, 'The Right to Take Part in Cultural Life: On Copyright and Human Rights', *Wisconsin International Law Journal*, 27 (2010), p. 634. Available at <http://ssrn.com/abstract=1437319> [accessed 2 May 2011].
- 3 See generally, Amy Kapczynski & Gaëlle Krikorian, 'Access to Knowledge in the Age of Intellectual Property', 2010. Available at http://mitpress.mit.edu/books/full_pdfs/Access_to_Knowledge_in_the_Age_of_Intellectual_Property.pdf [accessed 2 May 2011]; Amy Kapczynski, 'The Access to Knowledge Mobilization and the New Politics of Intellectual Property', *The Yale Law Journal*, 117 (2008), pp. 804–85. Available at <http://www.yalelawjournal.org/images/pdfs/642.pdf> [accessed 2 May 2011].
- 4 I have also developed these arguments in a recent article: Lea Shaver, 'The Right to Science and Culture', *Wisconsin Law Review*, 2010 (2009), pp. 121–84. Available at <http://ssrn.com/abstract=1354788> [accessed 2 May 2011].
- 5 *Novartis v Union of India* (2007) 4 MLJ 1153, ¶ 19.
- 6 *Roche v Cipla*, I.A. 642/2008 IN CS (OS) 89/2008, ¶ 85.
- 7 *INP+18 v Boehringer Ingelheim*.
- 8 The term 'TRIPS-plus' refers to intellectual property protections that go above and beyond the requirements imposed by the Agreement on Trade-Related Aspects of Intellectual Property Rights. Data-exclusivity rights are one example. These would prevent generic companies from relying on existing clinical trial data to prove safety and effectiveness when introducing generic versions of existing drugs. The intended effect of data-exclusivity rights would be to give pharmaceutical companies a long period of legally enforced market exclusivity, even in the absence of a valid patent.
- 9 See Note 1.
- 10 See Monica Steffen Guise Rosina, Daniel Wei Liang Wang and Thana Cristina de Campos, 'Access to Medicines: Pharmaceutical Patents and the Right to Health', in Lea Shaver (ed.), *Access to Knowledge in Brazil: New Research on Intellectual Property, Innovation and Development* (London: Bloomsbury Academic, 2010), pp. 103–34. Available at <http://leashaver.net/books/>.
- 11 Guise *et al.*, 'Access to Medicines', pp. 105–6.
- 12 Guise *et al.*, 'Access to Medicines', pp. 113–15. TRIPS refers to the Agreement on Trade-Related Aspects of Intellectual Property, administered by the World Trade Organization.
- 13 Guise *et al.*, 'Access to Medicines', pp. 107–13.
- 14 Guise *et al.*, 'Access to Medicines', pp. 107–10.
- 15 *Soobramoney v. Minister of Health, Kwa-Zulu Natal*, 1997 (12) BCLR 1696 (CC) (emphasizing the reasonability of cost-benefit judgements in allocating limited health care resources and holding that the right to health and right to life did not entitle a chronically ill patient to publicly funded treatment that would have prolonged his life).
- 16 Guise *et al.*, 'Access to Medicines', pp. 110–13; Rizk & Shaver, *Access to Knowledge in Egypt*; Shaver, *Access to Knowledge in Brazil*.
- 17 Guise *et al.*, 'Access to Medicines', pp. 110–11.
- 18 See Guise *et al.*, 'Access to Medicines', pp. 126–7.
- 19 Hossam Bahgat & Rebecca Wright, 'Access to Medicines in Egypt: A Human Rights Approach to IP, Trade and Health', in N. Rizk & L. Shaver (eds), *Access to Knowledge in Egypt: New Research on Intellectual Property, Innovation and Development* (London: Bloomsbury Academic, 2010), 56–91. Available at <http://leashaver.net/books/>.
- 20 Bahgat & Wright, 'Access to Medicines in Egypt', pp. 57, 64–76.
- 21 Bahgat & Wright, 'Access to Medicines in Egypt', pp. 56–62.

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- 22 Bahgat & Wright, 'Access to Medicines in Egypt', pp. 57, 80–85.
 - 23 See Eric E. Johnson, 'Intellectual Property's Great Fallacy', SSRN Working Paper Series, 23 January 2011. Available at <http://ssrn.com/abstract=1746343> [accessed 2 May 2011].
 - 24 A foundational work on these questions is Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (New Haven, CT: Yale University Press, 2006). Available at http://cyber.law.harvard.edu/wealth_of_networks/Main_Page [accessed 2 May 2011].
 - 25 Under US patent law, applicants may claim a technology or technique as a new and patentable 'invention', even where it is already widely known and used in another country, so long as it is newly introduced to the United States. 35 U.S.C. § 102(a)–(b). Description of the technology or technique in a printed publication, however, will prevent patentability in the United States, no matter where in the world the publication was made. Benkler, *The Wealth of Networks*.
 - 26 Universal Declaration of Human Rights, G.A. Res. 217A, Art. 27, U.N. GAOR, 3d Sess., 1st plen. mtg., U.N. Doc. A/810 (Dec. 10, 1948).
 - 27 Shaver, 'The Right to Science and Culture'.