

Drahos, Peter. “Patent Reform for Innovation and Risk Management: A Separation of Powers Approach.” *KEStudies*, vol. 1 (2007)

Patent Reform for Innovation and Risk Management: A
Separation of Powers Approach

Peter Drahos
RegNet, Australian National University

Institutions for Innovation – From the 19th to the 21st century

When it comes to creative thinking and experimentation with institutions for rewarding innovation, it is probably the 19th century that can claim to be the most exciting. Most European states only passed patent laws in this century.¹ Concerns about the adverse effect of these laws on innovation, competition and trade saw patent abolitionist movements organized all over Europe.² The Netherlands, having passed a patent law in 1817, concluded that it was better off without it and repealed it in 1869. The debates in Switzerland persuaded the Swiss that the best industrial strategy for them was not to adopt a patent system.³ In the UK, leaders of the abolitionist movement like Robert Macfie argued that with the UK dramatically reducing its tariffs, British manufacturing would best be served by the repeal of the patent system. Patents allowed their owners to impose, in effect, private tariffs on domestic manufacturers, thereby hindering their ability to compete in international markets. Critics pushed the idea that reward systems should be used rather than patents. The Society for the Encouragement of Arts, Sciences and Manufacturers began offering modest rewards for useful discoveries on the condition that the inventor did not patent the invention, as did some UK Chambers of Commerce.⁴ Macfie proposed that governments should pay these rewards, arguing that they would achieve a more targeted approach to innovation that allowed others to compete in the manufacture of the invention.⁵ He also suggested that the leading industrial states globalize such a reward system by creating an international fund from which inventors could be rewarded.

States also experimented with different approaches to patent administration. From 1793 to 1836, the US adopted a registration-only system. After a US Senate inquiry uncovered huge problems with patent quality, the US decided

¹ For the dates see Machlup, Fritz. “An Economic Review of the Patent System.” Study of the Subcommittee On Patents, Trademarks And Copyright of the Committee On The Judiciary, US Senate, 85th Congress, 2d Session, Washington, 1958: 3-4.

² Machlup, Fritz and Edith Penrose. “The Patent Controversy in the Nineteenth Century.” *Journal of Economic History*, 10 (1950): 1.

³ They eventually enacted a rather weak patent law in 1888. See: Ritter, D.S. “Switzerland’s Patent Law History.” *Fordham Intell. Prop. Media & Ent. L. J.*, 14 (2004): 463.

⁴ Coulter, Moureen. Property in Ideas: The Patent Question in Mid-Victorian Britain. Thomas Jefferson University Press, Kirksville, Missouri, 1991: 121.

⁵ *Ibid.* pg. 87.

to invest in the creation of a high standard examination system.⁶ The UK invested comparatively little in patent administration for most of the 19th century, keeping patent fees very high until near the end of the century. For example, the official fee for obtaining a patent in England up until 1852 has been estimated at £100 and for the UK £300.⁷ On any method of calculating the current value of £100 in 1830 it was a lot of money, as Table 1 below shows.⁸ Little wonder that the 19th century has been described as the era of “patentless invention”.⁹

Table 1 UK

In 2005, **£100 0s 0d** from 1830 was worth:

£6,788.27 using the retail price index

£8,666.94 using the GDP deflator

£74,225.65 using average earnings

£100,251.65 using per capita GDP

£253,501.73 using the GDP

Arguably the most important innovation within the patent system in the 19th century was the introduction of the principle of compulsory licensing. Compulsory licensing was the great “strategic compromise” of the century between patent advocates and free trade critics.¹⁰ It gave manufacturers a means to access the use of a technology that did not depend on the patent owner’s consent.

The 20th century was an age of institutional innovation when it came to funding creativity. The states that did best were those like the US that invested heavily in education and publicly funded basic research (US federal funds accounted for one-half to two-thirds of R&D spending in the second half of the 20th century).¹¹ The 20th century was also the century in which

⁶ For a description of the problems that the US Senate committee identified, see the passage extracted in Lawrence C. Kingsland. “The United States Patent Office.” *Law & Contemporary Problems*, 13 (1948): 354, 359.

⁷ See: “Report of The Commission Appointed To Inquire Into The Working Of The Law Relating To Letters Patent For Inventions.” Her Majesty’s Stationery Office, London, 1865, Appendix I.

⁸ The table is an output from calculators available at MeasuringWorth.com.

⁹ Klaus Boehm with Aubrey Silbertson, *The British Patent System, Volume 1*, Cambridge University Press, Cambridge, 1967: 37.

¹⁰ This point is made by Fritz Machlup in “An Economic Review of the Patent System.” Study of the Subcommittee On Patents, Trademarks And Copyright of the Committee On The Judiciary, US Senate, 85th Congress, 2d Session, Washington, 1958, 5. In the UK, however, it was always the case that the Crown could use the patent without the permission of the patent owner. It was not until the 1883 Patents Act that the Crown was obliged to pay compensation.

¹¹ Mowery, D.C. and N. Rosenberg. “Paths of Innovation.” Cambridge University Press, Cambridge, 1999, 30.

western states came to depend excessively on patents to reward innovation. Institutional innovation for the entire century travelled in the direction of strengthening the patent system. Internationally, convergence and co-operation in patent law were the century's dominant themes. In Europe, Holland and Switzerland joined the patent fold. After World War II, the European Economic Community took over the work that had been started on the unification of patent law by the Council of Europe in 1949, work that ultimately led to the European Patent Convention of 1973. Cooperation on patent procedure expressed itself amongst states in the form of the Patent Cooperation Treaty of 1970, and amongst the three major patent offices (the European Patent Office, the US Patent and Trademark Office and the Japanese Patent Office) in the shape of annual Trilateral Conferences from 1983 onwards. Four other regional patent organizations were formed: the African Intellectual Property Organization (OAPI is an organization of French-speaking African states), the African Regional Industrial Property Organization (ARIPO is an organization of English-speaking African states), the Eurasian Patent Organization, and the Patent Office of the Gulf Co-operation Council. The last decade of the 20th century saw the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) come into operation in 1995, meaning, amongst other things, that many developing country members of the WTO had to start investing in patent administration.

Regions without regional patent organizations have located within them large patent offices that generally undertake work such as patent examination for other countries in the region or nearby regions. For example, Eastern Asia has the Chinese, Japanese and Korean Patent Offices and Oceania has the Australian Patent Office. These offices have, or are developing, relationships with smaller patent offices. These relationships take the form of Memoranda of Understanding, co-operation agreements and/or exchanges of personnel that are all aimed at increasing the efficiency of patent-granting processes.

The 20th century proved to be the century of innovation in patent bureaucracy and the regulation of markets by patent owners using patenting strategies. Whether this staggering global growth in patent bureaucracy and patent regulation of markets actually caused much scientific and technological innovation to occur that would otherwise not have occurred and at a cost that did not outweigh the benefits is a question to which we will probably never have an answer. More often than not, analysis of the patent system begins with a presumption in its favour: "High levels of innovation in the United States would seem to be evidence that the intellectual property system is working well and does not require fundamental changes."¹² Sceptical real world analyses of the patent system's costs are thin on the ground. Machlup's analysis, despite its age, remains one of the best.

At the beginning of the 19th century, few European states had patent law and none had recognizably modern systems of patent administration. At the beginning of the 21st century there are only a handful of countries that do not have patent law and a system of patent administration – Timor Leste, Solomon Islands, Marshall Islands and Palau are examples. Patent law and,

¹² Merrill, Stephen A., Richard C. Levin and Mark B. Myers (eds.). A Patent System for the 21st Century. National Academies Press, Washington, D.C., 2001: 19.

much more importantly, supporting systems of patent administration now enmesh states and systems of innovation. The growth of patent bureaucracy has become a self-sustaining enterprise. Patent offices generate fees that they keep or which are returned to them by governments for the purposes of running and spreading patent administration. So, for example, the EPO drafts examination manuals for developing countries and trains examiners in their use, and the USPTO brings examiners from India and Brazil to its training facilities in Alexandria, Virginia and helps them understand the art of pharmaceutical examination.¹³

The scope for institutional experimentation with the patent system is much diminished compared to the 19th century. No country today can do what the Netherlands did in 1817 and repeal its patent law. Developing countries have even less freedom to operate when it comes to the patent institution. As the recent case of Thailand shows, even a modest use of the principle of compulsory licensing in relation to medicines attracts a “shock and awe” response from the international pharmaceutical industry and its many Congressional apparatchiki. Within developed countries, what passes for patent reform is a game of nuances concerning, for example, the right level at which to set the standard of inventiveness. But if the patent institution is fundamentally inefficient, this will do little to improve its efficiency, any more than a percentage point drop in agricultural tariffs will help liberalize trade in agriculture.

At some point more radical design approaches to the patent system will be taken more seriously by states. Generally speaking, regulatory reform is crisis driven.¹⁴ Nuclear power plants have to experience disaster and oil tankers have to spill millions of tons of oil before there are improvements in the regulation of nuclear power and marine pollution. It is also clear that these disasters have to affect the well-off in developed countries. Poor people dying in large numbers in developing countries gains comparatively little regulatory action amongst western policy elites when it comes to the international patent regime, although these days it does generate a lot of placatory ritualism, such as the WTO’s so-called Paragraph 6 solution in relation to the access to medicines problems of developing countries.¹⁵

Over time the patent system’s inefficiencies in the innovation and diffusion of medicines will create larger scale access problems in developed countries. Climate change may also prove to be a rather big exogenous variable for those who guard the patent system with the intensity of zealots. For the purposes of managing climate change, states will want faster innovation and diffusion of alternative energy technologies, plants for food and agriculture and technologies for efficient water use. And, of course, climate change may cause changes in the geographic spread of pathogens and diseases. Colonization by Europeans from about the 16th century spread diseases to many developing countries that assisted in, for example, the conquest of the

¹³ For example, the EPO drafted the examination manual for the Philippines Patent Office. Information about the USPTO’s training of developing country examiners was obtained from the USPTO.

¹⁴ For a survey see: Braithwaite, J. and P. Drahos. Global Business Regulation. Cambridge University Press, Cambridge, 2000.

¹⁵ For an analysis see: Drahos, P. “Four Lessons for Developing Countries from the Trade Negotiations Over Access to Medicines.” *Liverpool Law Review* (forthcoming 2007).

Aztec empire.¹⁶ Climate change may enable those countries to return the favour. The patent system in its present form is a risk factor, rather than a tool, of risk management for handling these kinds of large-scale changes and crises. The system has an appalling track record in producing medicines for tropical diseases.¹⁷ In the case of the treatment for avian bird flu recommended by the WHO, the system produced an outcome where the highest risk countries had the smallest stockpiles and the lowest risk countries the biggest.¹⁸ The argument that the patent system contributes to the diffusion of knowledge would be laughable if the stakes were not so high. Patent specifications, which are meant to disclose the invention, are drafted by patent attorneys in a species of legalese that mocks the values of open science and communication. Consider what Justice Mayer (dissenting) said about the US standard of disclosure, a standard that is higher than found in other patent laws: “With this case, the court blesses corporate shell games resulting from organizational gerrymandering and wilful ignorance by which one can secure the monopoly of patent while hiding the best modes of practicing the invention the law expects to be made public in return for its protection.”¹⁹

The globalized patent institution we have today was never designed by states as a tool for the management of risk. Historically speaking, the principal players that have most influenced the evolution of the current system of governance have been the big business owners of patents, the patent attorney profession and lead states in terms of patenting. At the end of 19th century, the lead patenting states (US, UK, Germany, France) took the decision to support the patent system not for reasons of public welfare, but because of its importance to state power. It is worth reminding ourselves that the industrialists who spoke in favour of patents in the closing decades of the 19th century also came from the industries that mattered to the military power of states: iron, steel, chemicals and electricity. Once the decision to support the patent system was taken, the technocratic management of the system was handed over to the mostly newly created patent offices of states and the big industrial users of the system. The rest, as they say, is history.

At the beginning of the 21st century, most states, with one or two notable exceptions, are not bent on war. They want economic development. But increasingly they realize that this economic development must be careful not to cause environmental systems to begin tipping like so many dominoes. More than ever they need a patent system that diffuses innovation and serves global risk management goals, especially in health and the environment rather than beggar-thy-neighbour trade agendas. Patent systems in their present form represent unhealthy concentrations of power and dominance in which networks of big businesses, patent attorneys and patent offices cooperate to produce an insider governance of the system.

¹⁶ Weiss, R.A. and A.J. McMichael. “Social and environmental risk factors in the emergence of infectious diseases.” *Nature Medicine Supplement*, 10(12), (2004): 570, 572.

¹⁷ Thirteen of the 1,223 new chemical entities between 1975 and 1997 related to tropical diseases. See Mirza, Zafar. “WTO, TRIPs, Pharmaceuticals and Health: Impacts and Strategies.” *Development*, 42 (1999): 92, 95.

¹⁸ Lokuge, Buddhima, Peter Drahos and Warwick Neville. “Pandemics, antiviral stockpiles and biosecurity in Australia: what about the generic option?” *Medical Journal of Australia*, 184(1) (2006): 16-20.

¹⁹ See *Glaxo, Inc. v. Novopharm Ltd.*, 52 F.3d 1043,1053, (Fed. Cir. 1995).

The separation of powers principle

The design principle that can reshape this insider governance and that matters most to the future evolution of the patent system is the principle of the separation of powers. It is an important idea in the Western political tradition, perhaps the most important. Conceived of broadly, in the way that it is in *The Federalist Papers*, it requires power to be divided and regulated by a system of checks and balances. Institutional designers guided by it must work towards limited and decentralized structures of power, or to borrow Madison's description of its application to public and private affairs, "the constant aim is to divide and arrange the several offices in such a manner as that each may be check on the other – that the private interest of every individual may be sentinel over the public rights."²⁰ Many principles of governance and regulation, such as the principle of transparency, accountability and audit, serve this most fundamental political value.

Patent systems, as our discussion has shown, have grown dramatically and in ways that have seen power being centralized in fewer patent offices. The first step in genuine patent reform is to break up these concentrations of power, to flip the system from insider governance to a networked governance that draws expertise and values from many communities of innovators. Below are four design ideas that draw on the principle of a separation of powers and that are aimed at making the system more responsive to communities of innovators.

1. New Insiders for Insider Governance

Patent offices typically have policy committees or advisory committees. These committees usually have a heavy representation from business and the patent attorney profession. If there is broader representation, it is usually token. Insiders have little incentive to raise critical questions or issues in the development of patent office guidelines. Rather, the focus is on productive efficiency, on making it easier, cheaper and faster to obtain patents. Questions of fundamental principle do not get raised. For example, biotech patent attorneys and patent offices have little incentive to ask whether, as a matter of legal principle, purified biological materials substantially identical to those that occur in nature actually do cross the threshold of 'invention' so as to be eligible for the grant of a patent. Both parties have a financial incentive not to do so. Biologists working in public research institutions may have different views of the invention threshold. Similarly, drugs that have been patented as a combination of left and right hand molecular structures are being re-patented by pharmaceutical companies as either left or right-handed drugs.²¹ The real question that society wants an answer to is not whether this is inventive as a matter of a patent law jurisprudence, a jurisprudence that has been paid for by decades of pharmaceutical company litigation, but rather whether it is innovative as judged by the community of experimental pharmacologists, a community which tends to look for genuine leaps in therapeutic benefits rather than clever marketing strategies.

²⁰ Madison, James, Alexander Hamilton and John Jay. *The Federalist Papers* ed. Isaac Kramnick, Penguin, Harmondsworth, 1987: 320.

²¹ See: Somogyi, A., F. Bochner and D. Foster. "Inside the isomers: the tale of chiral switches." *Australian Prescriber*, 27(2), 2004: 47.

One obvious balance to the system would be to look at ways in which patent office systems for producing policy, manuals, guidelines and rules can be connected to communities where real innovation takes place. An obvious place to start is with the key committees that guide patent office systems. Currently, patent office systems are heavily connected to the patent attorney profession, the members of which tend to be experts in strategic patenting behaviour, and not innovation. Under a separation of powers approach, breaking up this kind of insider governance requires an infusion of new insiders.

2. An External Audit Check

A system that ensures patent quality, like the Holy Grail, has proved hard to find. Well-resourced patent offices will have internal procedures for checking the work of examiners (for example, the EPO has a Quality Audit Directorate). Litigation is another test of patent quality, but only a tiny fraction of patents are litigated. Another separate strand of governance that could be employed is the external audit of granted patents. Each year a committee of independent experts would target some key areas of patenting (for example, pharmaceuticals, software, biotechnology, nanotechnology) and audit the quality of a sample of patents in that area. It would report its findings to a body independent of the patent office, such as, for example, a legislative committee. Legislators and ministers in many countries are deeply ignorant of the actual workings of patent offices and tend to be excessively reliant on them for advice, advice that tends to be of a predictable kind. External audit mechanisms for patent offices would catalyse different information flows about patents to legislators, something needed in many, if not most, countries.

This audit mechanism could potentially be combined with other strands of governance to form a powerful tool of networked governance. Companies encountering patent thickets could feed information to the external patent audit committee so that it could focus its resources on problem areas. This committee would be, as it were, a guardian of the guardians and alert other independent actors within the system of problems. It would also be an independent source of technical information for legislative bodies.

3. Transparency Registers

The great legitimating juridical ideal that is deeply embedded in patent laws around the world is that of the patent social contract. In the words of the US Court of Appeals for the Federal Circuit, the “whole purpose of a patent specification is to disclose one's invention to the public. It is the quid pro quo for the grant of the period of exclusivity.”²²

In theory, the patent system is meant to disclose invention information and create certainty for downstream innovators. In practice, precisely the reverse happens. Modern, large-scale patenting creates large-scale rule complexity that leads to uncertainty. Companies are often not sure that they have found all the patents relevant to a product on which they are working.

²² *LizardTech, Inc. v. Earth Res. Mapping, Inc.*, 433 F.3d 1373, 1375 (Fed. Cir. 2006).

They often have doubts about the scope of the patents they have found. Patents, unlike blocks of land, do not come with settled boundaries. The Swedish Patent and Registration Office, in commenting on the reform of the International Patent Classification system, observed in 1999 that the problems with the IPC had grown to a point “where even experts have trouble making accurate searches.”²³

These kinds of uncertainty are especially dangerous from the point of view of the public management of risk, as the recent experience with Roche’s patents and licences over oseltamivir illustrated. Roche’s reluctance to disclose the patent situation in each country left public health officials confused as to what or what was not permissible in terms of the manufacture and importation of oseltamivir, the drug that the WHO has recommended as a frontline tool for dealing with an outbreak of avian bird flu.

In order to deal with the complexity and uncertainty that is deliberately generated by the gaming behaviour of sophisticated players within the patent system, simple, bright-line rules are needed to remove this complexity.²⁴ One way to do this would be for regulatory agencies to establish patent transparency registers in areas of technology where there were serious risk management issues and transparency concerning the patent situation was a matter of public interest, or, to borrow the words of Article 27(2) of TRIPS, patent transparency was necessary “to protect human, animal or plant life or health or to avoid serious prejudice to the environment.”²⁵ The scope of the transparency register’s operation would be a matter for a regulator to decide as part of a risk assessment exercise. A register could target, for example, research tools in biotechnology, particular classes of drugs, specific plants or genes. Companies would be required to use the registers to make a full disclosure of the patents surrounding the targeted technology. Other companies would be able to rely on the register knowing that there were no other hidden surprises for them. In addition, the registers would require the disclosure of information relating to ownership and licensing. This information is in practice difficult to track down. Private clearinghouse mechanisms have failed to provide this information in any systematic way.

The cost to a company of not disclosing on the register a patent that it should have disclosed could be some form of estoppel that would prevent it from enforcing that patent. Some companies might respond by flooding the transparency register with patents. A deterrence mechanism could be used to overcome this potential problem. A patent (or some of its claims) put on the register that could not be shown to have reasonable prospects of enforcement by a court in an infringement action could be taken off the register. Procedures for removing patents from a transparency register would, in the first instance, be swift and administrative in nature. If it were later proved that the patent owner had no reasonable basis for believing the patent or some of its claims to be enforceable, severe financial penalties could be imposed on the company and the patent attorneys responsible for drafting the patent. Section 26C of the Therapeutic Goods Act 1989

²³ See IPC/R 1/99 Rev. 1 Annex 10, 1-2.

²⁴ For a philosophical defence of simple rules for dealing with complexity see Epstein, R. Simple Rules for a Complex World. Harvard University Press, Cambridge: 1995.

²⁵ The idea of transparency registers was first put forward by the present author in 2004 in the context of the debates over the US-Australia FTA.

(Australia), for example, imposes a penalty of \$10 million on companies in order to deter companies from using patents of doubtful validity as part of a strategy of preventing or delaying the registration of generic drugs. Probably much higher fines are needed, as well as criminal penalties.

Transparency registers would only need to be created by regulatory agencies in areas where it was important to reduce the social costs of the uncertainty and complexity being orchestrated by patent owners. Society can live with the uncertainty generated by patents over tennis racquets. It should not have to live with uncertainty, as in vital areas like pharmaceuticals, that compromises its ability to respond to serious threats like pandemics.

4. Creating Global Standards of Patent Transparency

If the patent social contract requires the disclosure of the invention to the public, by implication it also requires that the public be able to find the patent in the first place. Most 19th century patent statutes obliged patent offices to keep registers that members of the public could search. Current searching tools available to the public from patent offices are of variable quality. Essentially, in many developed countries, one is required to have access to commercial databases in order to do comprehensive searching. In developing countries electronic searching is not possible, or it exists in a limited form. Patent offices themselves have complicated relationships with commercial providers who obviously do not want patent offices investing in search systems that provide patent information as a public good and in a user-friendly way.²⁶ These commercial providers make their living because patent offices fail to provide search systems that would allow members of the public a meaningful exercise of their rights to access invention information, rights that they hold by virtue of the patent social contract.

In theory, it should be possible to have a technology platform that searches all the world's patents, allowing users to organize that information in various ways (around ownership, technologies, countries etc). The algorithms that run Google and Wikipedia would seem to suggest that we can achieve global levels of transparency for patent and invention information. As Richard Jefferson has observed, current levels of patent opacity really only serve the interests of patent law firms that "accumulate billable hours by providing the same information over and over for different customers, and charging full fees to update them periodically."²⁷ Jefferson's organization, CAMBIA, has shown what is possible when it comes to creating global patent transparency. Its Patent Lens system allows for simultaneous searching of USPTO, PCT, European and Australian patent information, including information about patent families in many countries. Patent Lens is a free service, available to anybody with an Internet connection.²⁸

One of the aims for Patent Lens is to build a level of transparency into the system that will enable communities of innovators around the world to develop topographies of patented areas of technology that will help those communities make decisions about how to invest their limited resources.

²⁶ Jefferson, Richard. "Science as Social Enterprise: The Cambia BiOS Initiative." *Innovations*, Fall 2006: 13, 28.

²⁷ *Ibid.* pp. 28-29.

²⁸ <http://www.patentlens.net/daisy/patentlens/patentlens.html>

If one small organization in Australia can advance the cause of global patent transparency as a public good this far, then this suggests that states and their patent offices are not trying very hard. The current level of patent opacity does not serve innovation or goals of risk management. Those working on, for example, water technologies, ought to be able to call up, in the time that it takes to do a search on Google, the patent maps and analyses that will affect their plans for such technologies. Global patent transparency is the foundation upon which other reforms of the patent system will have to be built.

Conclusion: From Fordism to Networked Governance

We live in a world of networks. On every issue that one cares to think about there are clusters of active networks. It is a world of networked governance. In this world an organization's capacity to utilize knowledge for innovation and other purposes depends on its capacity to utilize the networks in which that knowledge flows. Knowledge utilization depends on network utilization. Yet patent offices remain curiously detached from this world, still operating as the hierarchical entities they were created as in the 19th century. Single examiners in most offices carry the responsibility for making judgments about correspondence on patent files that have huge implications for innovation. Those examiners are not integrated into communities of innovators. Their relations with those communities are mediated by the patent attorney profession, a profession devoted to levels of artifice that would embarrass even those used to debating how many angels can dance on the point of a needle.

The major patent offices believe they can solve their backlog problems by employing more examiners and adopting a strategy of mutual recognition for the decisions of other 'trusted' offices. It is a Fordist response: create a giant patent assembly line and run off more and more patents. Millions more patents will simply scale up complexity and therefore uncertainty. It is a safe bet that this response will not work to meet the goals of innovation and risk management.

If Fordism is not the right response for patent offices, what is? The answer lies in patent offices adapting to a world of networked governance. This means recognizing that knowledge is dispersed through a plurality of networks and that the utilization of that knowledge requires patent offices to find ways to utilize those networks. Patent offices have to shift from being Fordist hierarchies to open nodes that integrate into their operations the multitude of networks of innovation that really matter to efficient patent contracting. One can get a sense of the possibilities of networked governance from the Peer to Patent Project that the USPTO is trialing. This project connects examiners and members of the software community through patent Wikis for the purpose of creating an open review process for patent prior art.²⁹ CAMBIA's Patent Lens also suggests that higher standards of global patent transparency are possible, and that this

²⁹ See: <http://dotank.nyls.edu/communitypatent>; Noveck, Beth S. "Peer to Patent." *Collective Intelligence, Open Review, And Patent Reform, Harvard Journal of Law & Technology*, 20 (2006): 123.

transparency will open the door for more communities of innovators to participate in the governance of patent systems.

Much as in the closing decades of the 19th century, at the beginning of the 21st century there are some big ideas on the table for states to consider in relation to innovation and its reward (for example, open source innovation, treaties on medical research and development, and access to knowledge).³⁰ New approaches to patent office administration are also needed to meet the goals of innovation and to manage global health and environmental risks. This time around, states cannot afford to listen to the concentrated interests that encrust patent administration. The separation of powers is the right principle with which to begin the process of reform.

Peter Drahos is a Professor in Law and the Director of the Centre for the Governance of Knowledge and Development in the Regulatory Institutions Network (RegNet) at the Australian National University, Canberra.

³⁰ On open source for biotechnology, see: <http://rssh.anu.edu.au/~janeth/>. On the treaties, see: http://www.keionline.org/index.php?option=com_frontpage&Itemid=1; Drahos, P. "An Alternative Framework for the Global Regulation of Intellectual Property Rights." *Journal Für Entwicklungspolitik*, vol. XXI, No. 4, 2005: 44-68.