LITERATURE REVIEW

IPR—General


This paper compares and contrasts how innovation—the successful introduction of new products, services, or techniques—is occurring in biotechnology seeds in China and India. The authors begin with an overview of the agricultural challenges faced by China and India and the substantial investments that both countries are making in agricultural research and development (R&D) and biotechnology to address these challenges. The paper further describes each country’s approach to three factors identified by industry as important to innovation in biotech seeds: market access, intellectual property (IP) protection, and efficient regulatory review processes. The authors found substantial problems in all three areas including limited market access for foreign firms in China and significant price caps in India; limitations and gaps in IP protection and enforcement; and lengthy delays in regulatory review. The paper concludes with a case study highlighting how the three factors shaped the introduction and adoption of the first widely commercialized biotech crop in China and India, Bt cotton.


What are the effects of strengthening developing countries’ protection for intellectual property rights on economic growth and income inequality in the global economy? To analyse this question, the authors developed a two-country R&D-based growth model with wealth heterogeneity. In this growth-theoretic framework, they showed that strengthening patent protection in either country increases economic growth and income inequality in both countries. Furthermore, they derived the Nash equilibrium level of patent breadth and found that it is sub-optimally low relative to globally optimal patent breadth due to the positive externality effects that are captured by a spillover parameter.


A significant divide has developed between the large portion of the WTO membership which sees little or no benefit from the TRIPS undertakings and the small number of advanced economy members who seek ever greater IP standards. This chasm – between those who now judge TRIPS to be overreaching and those who find TRIPS to be inadequate – raises doubt as to whether a TRIPS consensus continues to exist. Our story is one of two regrets: that TRIPS did not go far enough, that TRIPS went too far. In particular, the call for more IP protection, known as ‘TRIPS Plus’, has led to even greater fragmentation of the global intellectual property system. To ask for more, when the other side wishes to offer less, is a path to a potential breakdown. By pursuing TRIPS plus, through new free trade agreements, and in particular through the negotiation and implementation of the 2010 Anti-Counterfeiting Trade Agreement (ACTA) is to risk losing the moral force behind TRIPS. ACTA is a critique of TRIPS - its very core signals a diagnosis that TRIPS inadequately addressed the problem of IP enforcement. After ACTA, one cannot read TRIPS as expressing the common understanding of the world community as to the minimum standard of IP protection. ACTA formalizes a rift between the developed world and many other countries (it is these non-signatory countries where ‘counterfeiting’ and ‘piracy’are perceived to be most prevalent). With ACTA, the developed world (led by the United States) is playing a high-stakes game. It seeks to destabilize TRIPS in order to induce movement. But in so doing, it also necessarily undercuts the prestige,
normative pull, and - perhaps - legitimacy of TRIPS. For if one group of WTO members distance themselves from TRIPS (due to its asserted ineffectiveness or obsolescence), so too might another group. Ironically, what all these countries might share is a judgment that TRIPS is failing - though of course their respective prescriptions for reform would differ. ACTA may prove strangely counterproductive. Instead of achieving higher IP standards, it may lead to an increasingly resented, and hence less effective, observation of TRIPS.


The early 1980s, countries began to allow patenting of biotechnological processes and products, creating technology advancements and rapid development of private industry. Part of the industry development that ensued was a consolidation of small firms and the creation of a few, large life science companies, each owning the requisite intellectual property (IP) and having freedom-to-operate. Despite the ability and potential gains from doing so, for many years there was very little apparent flow of IP between firms, separating potentially complementary technologies. A recent development in the ag-biotech industry has been the increase in gene trait cross-licensing agreements. While these agreements hold much promise as means to facilitate the much needed sharing of IP, they raise additional concerns with respect to market concentration. This article examines publicly accessible information about the nature of these IP sharing agreements and the incentives they may create.


Traditional knowledge can be protected, to some extent, under various intellectual property laws. However, for the most part, there is no effective international legal protection for this subject matter. This has led to proposals for a *sui generis* regime to protect traditional knowledge. The precise contours of the right are yet to be determined, but a *sui generis* right could include perpetual protection. It could also result in protection for historical communal works and for knowledge that may be useful but that is not inventive according to the standards of intellectual property law. Developing countries have been more supportive of an international traditional knowledge right than developed countries. At the same time, developing countries have been critical of the impact of intellectual property rights on social issues such as access to medicines and access to educational materials. In the light of developing country concerns about the negative effects of strong global intellectual property rights, this paper uses a development-focused, instrumentalist approach to assess the implications of a *sui generis* traditional knowledge right. It concludes that some of the measures sought may not achieve the desired outcome. Although intellectual property can play a role in protecting traditional knowledge, a *sui generis* intellectual property style right may hinder the equity-oriented goals of some traditional knowledge communities.


On the 30th anniversary of enactment of the Bayh–Dole Act in the US, the authors considered the rationale for academic entrepreneurship and described the evolving role of universities in the commercialization of research. The authors also discussed and appraised the effects of legislative reform in several OECD countries relating to academic entrepreneurship. The article synthesizes papers from the special section and outlines an agenda for additional research on various aspects of academic entrepreneurship in terms of system, university and individual levels. They also considered measurement and methodological issues that must be addressed in additional research.


This article examines the expansion of the subject matter that can be protected under intellectual property law. Intellectual property law has developed legal rules that carefully balance competing interests. The goal has long been to provide enough legal protection to maximize incentives to engage in
creative and innovative activities while also providing rules and doctrines that minimize the effect on the commercial marketplace and minimize interference with the free flow of ideas generally. The expansive view of subject matter protectable via intellectual property law has erased the clear delineation between patent, copyright, and trademark law. This has led to overprotection of intellectual property in the form of overlaps which allow multiple bodies of intellectual property law to simultaneously protect the same subject matter. Such overlapping protection is problematic because it interferes with the carefully developed doctrines that have evolved over time to balance the private property rights in intellectual creations against public access to such creations. This article examines the competing policies that underlie the various branches of intellectual property law. It then discusses the expanding domain of subject matter protected by patent, copyright, and trademark law. Finally, it examines the overlaps that exist under patent, copyright, and trademark law and the resulting problems with regard to software, clothing, computer icons, graphical computer interfaces, music, and useful commercial products.

**Patents**


Although the 2001 Doha Declaration on the TRIPS Agreement and Public Health confirmed the right of countries to use measures to ensure access to affordable medicines, only few countries in the developing world have done so. One factor for this scant use of the so-called TRIPS flexibilities has been the lack of accurate information on the patent status of the relevant medicines in developing countries. Clearly, there is a need for a systematic and pragmatic approach to speedily obtain data on the patent status of essential medicines, so that governments and procurement agencies can make informed decisions on available options for production and procurement of generic medicines. A simple and practical method is described in this paper, which enables searches for relevant patent data from publicly available (and free) sources of information. Using a combination of data from patent offices and medicine regulatory authorities that are available on the Internet, this methodology provides an inexpensive and pragmatic option to perform a quick search and access patent information on essential medicines.


Recently, there has been growing interest in new financial tools that leverage on intellectual property assets, such as patent-backed securitizations (PBSs). In this paper, the authors studied the potential determinants leading to the success or failure of securitization deals having patents as underlying assets. They developed a conceptual framework that they tested on two well-known US patent securitization deals in the pharmaceutical industry, by using a fuzzy set approach. Results highlight that factors related to the market size, level of competition and expected market life of the assets underlying a PBS can reasonably increase the probability that a deal will succeed. Moreover, a higher quality of the underlying invention and longer patent residual life are likely to reduce the risk of technical obsolescence and sales losses. Finally, the strength of the credit enhancement mechanisms, the flexibility of the deal architecture and the adoption of a diversification strategy are other key factors determining the success of the securitization.


The ‘best mode’ requirement, which mandates that an inventor disclose in her patent application the best way to practice her invention, has become a polarizing force as Congress endeavors to comprehensively revamp US patent law. This article examines the best mode requirement through a variety of lenses. In doing so, the article’s ultimate goal is to recommend the ideal course of action for best mode reform—to fix best mode, if it is indeed broken, or to scuttle it if it is beyond repair. To begin, this article sets forth and evaluates the arguments advanced by both proponents and opponents of the best mode requirement, paying particular attention to the viewpoints of neutral parties such as academics, governmental actors, and quasi-governmental actors. It was found that a significant majority of both
interested and neutral parties favour eliminating or substantially modifying the best mode requirement. The article then shifts from the realm of the qualitative to that of the quantitative, analysing recent decisions in patent cases from US federal district courts, the Court of Appeals for the Federal Circuit, and the Board of Patent Appeals and Interferences. Unfortunately for best mode supporters, the analysis shows that, in practice, best mode only plays an important role in a small percentage of patent lawsuits and has de minimis impact on the patent procurement process. This article concludes by recommending a radical change to the best mode requirement: simultaneously strengthening best mode and eliminating it as a defense in patent lawsuits. This solution provides the optimal incentives to minimize strategic behaviour by both patentees and accused infringers, reduce litigation costs, and improve meaningful disclosure in patent applications, thereby promoting innovation.


Access and benefit-sharing was a key objective of the United Nations’ Convention on Biological Diversity (CBD). Implementing this objective in Australia has seen the adoption of a contract model where the terms and condition and price of access are negotiated between the bioprospector and the resource holder. Patents are a part of the price. This article assesses the place of patents in theory and in practice through the examples of the Craig Venter Institute contract and the Griffith and AstraZeneca Partnership agreement(s) in Australia. The article concludes that there is little evidence that benefits flow to conservers and curators of in situ biodiversity (such as protected areas) and that uncertain property and use rights from patents may be further reducing the value bioprospectors are likely to pay to access and use biodiversity.


As the competitive environment has become more knowledge-based and as technological complexity and convergence have increased, companies’ innovation processes have gone through changes. It could be said that there has been a paradigm shift from closed innovation, where control over resources is paramount, towards a more open model. At the same time, the importance of intellectual property rights (IPRs) as a means to appropriate returns on R&D investments has increased and firms have begun to pay more attention to managing their IPRs. In this study, the relationship between innovation models and patent strategies and licensing practices of eight information and communications technology (ICT) companies interviewed in 2004 are examined. It was found that companies with different attitudes towards innovation also follow different paths in their strive towards appropriation and benefitting from innovation. The common denominator is that IPRs are only useful when they are in line with the business strategy.


It has long been understood that highly cited patents tend to be more commercially valuable than patents that are not frequently cited. Early identification of highly cited patents would enable a technology manager to concentrate commercialization resources on the most promising assets in a technology portfolio. There is therefore a need for predictive models of forward citation counts. We propose and test a theory that early forward citation observations can be a leading indicator of the future citations over the lifespan of a patent. The predictive model presented herein has implications for patent valuation, patent portfolio management and qualitative patent ranking programmes.


Using data on all high- and medium-tech start-ups in the UK in 2000, this paper assesses the effect associated with a firm’s decision to patent on a firm’s subsequent growth between 2001 and 2005. The authors propose a new approach to addressing well known issues challenging identification of any patent effect: firm heterogeneity, simultaneity between firm performance and patenting, and sample selection. Our findings suggest that patentees have higher asset growth than non-patentees of between 8% and 27% per annum.

There is a considerable volume of prior research on the relationship between innovation and patents. Those research studies reveal that patents contain a great deal of noise, and unless a correction is made in terms of the value of individual patents, a simple count of the number of patents does not constitute a very useful indicator. From research that has been conducted for the purpose of finding such an indicator to show the value of individual patents (that is, research to identify the characteristics of valuable patents), many kinds of value indicators have been proposed. Nevertheless, research hitherto has focused primarily on business or private value derived from the possession of patents, and little attention has been paid to value in terms of technical knowledge or social value. In a survey of inventors conducted by RIETI in 2007, terminology describing broad concepts was used when questioning inventors about the value of individual patents, and this has provided an excellent opportunity to analyse the multiple factors lying behind the value of patents and how they impact one another.

Something like the Sun: Why even ‘isolated and purified’ genes are still products of nature, Jackson Jonah D, Texas Law Review, 89 (6) (2011) 1453-1489.

In this note, the author argues that the ‘product of nature’ and ‘isolation and purification’ doctrines of patent law require the exclusion of gene patents encompassing functional genetic information. Under the product of nature doctrine, there can be no patents for laws of nature, physical phenomena, and abstract ideas. But under the isolation and purification doctrine, genetic material, despite being a naturally occurring substance, is patentable when separate from its naturally occurring environment. According to a 2005 estimate, 20% of the human genome was already subject to issued patents.

The author first introduces the basic science of genes and argues that they are best conceived of as carriers of information with unique properties significant to the question of patentability. He then explains both the product of nature and isolation and purification doctrines and identifies the rationales behind them. These doctrines currently permit patenting of genes. He further argues that gene patents encompassing functional genetic information should be excluded from patentability under the product of nature doctrine. This doctrine is concerned with excluding subject matter with a broad scope and of a fundamentally essential nature both because of economic consequences of patenting such subject matter and the broader implications to a democratic society.

Next, he breaks down the economic and moral arguments against gene patents before tying them to both the characteristics of genetic information and the doctrines previously described. Lastly, he discusses the prospects for exclusion of genetic information from patentable subject matter and takes up some objections. For example, some defenders of gene patents argue that thirty years of jurisprudence should not be overturned when the research on the negative consequences of gene patents is still equivocal. Jackson writes that this assumes gene patents were justified in the first place, but he thinks the evidence demonstrates this protection was never truly necessary. The author concludes that opponents of gene patents face an uphill battle. He hopes that this note can help combat the inertia of current law and lead to an understanding that, like the heat of the sun, genes are unpatentable products of nature.

The purpose of this research is to use data from the RIETI survey of inventors and structural equation modeling methods to elucidate the relationships between the technological and business value of patents, and the latent factors that influence them. The findings show that a scientific-technological motive for inventors would have a positive effect on both the business and technological value, meanwhile, the monetary or promotion motive would not have any direct effects on the value of a patent. The model also suggests that academic linkage would have a strong positive effect on the technological value but a weak negative effect on the business value. Furthermore, these relationships differ more markedly according to technological field.


The rise of business method patents in the late twentieth century, and the controversy that has accompanied such patents over the last decade, has often been cast as being precipitated by novel judicial precedent that radically departed from traditional understandings of patentable subject matter. In particular, the Federal Circuit’s decision in State Street Bank & Trust Co v Signature Financial Group has often been described, especially by opponents of
business method patents, as an example of judicial activism that introduced patents into a field where patenting was unwanted and unnecessary. This Article demonstrates that such an explanation for the rise of business method patents is not accurate. The rise of business method patents was generated not so much by any court decision or other change in the legal system, but rather by fundamental technological and industrial changes that, during the second half of the twentieth century, began to transform many business fields into branches of engineering. This article documents those technological and industrial changes and shows that the rise of business method patents is in fact an excellent case study in which the law followed, and accommodated, dramatic changes happening elsewhere in society.


The Supreme Court's Bilski decision changed the rules on patentable subject matter. This means that software and business method inventions must be claimed in specific ways in order for a patent to be valid. Bilski affects all software and business method patents, including patents issued to innovative and widely admired technology companies. As a result, many 'good' patents are now potentially invalid. The US patent system includes a patent reissue statute and long-standing reissue jurisprudence that promises patent owners the ability to liberally correct the claims of an issued patent, even when there has been a change in law after a patent has been issued. The change in the Supreme Court's jurisprudence on patentable subject matter would not be a severe problem if the reissue statute worked as originally intended. However, patent reissue proceedings, as currently implemented by the United States Patent & Trademark Office, are agonizingly slow and layered with restrictive rules. This makes reissue impractical, and even impossible, in many situations. Moreover, even if patents can be corrected to address Bilski, the patent owner still loses out on the ordinary investment backed expectations of owning an enforceable patent during lengthy reissue proceedings. As such, there is a potential regulatory taking from patent owners, because they are effectively unable to use reissue to adapt to the Supreme Court's changing rules on patentable subject matter. Solutions are proposed for how the courts and the patent office can apply the reissue statute to permit patent owners to restore their valuable patent rights efficiently and effectively.

**Forty years of wondering in the wilderness and no closer to the promised land: Bilski's superficial textualism and the missed opportunity to return patent law to its technology mooring,** Menell Peter S., *Stanford Law Review*, 63 (6) (2011) 1289-1314.

This acritically analyses *Bilski v Kappos*, the Supreme Court’s first decision on patentable subject matter since the early 1980s. It shows how the majority’s effort to shoehorn patentable subject matter into a superficial textualist mold obfuscates patentable subject matter boundaries and undermines the patent system on multiple levels. The article contends that the patentable subject matter pathology cannot be cured without confronting the roots of the disease: the lack of a forthright, principled framework for delineating the boundaries of patentable subject matter. The solution lies in recognizing that patentable subject matter cannot evolve to meet the new challenges of the information age without integrating eighteenth-, nineteenth-, and twentieth-century sources of patentable subject matter law into a flexible and evolving body of common law that is sensitive to history, statutory evolution, constitutional constraints, and an understanding of modern science and technology. This will be particularly important as courts confront the patentability of DNA compounds, diagnostic tests, and unforeseeable information age innovations.


While the literature examining university engagement in patenting and technology transfer is quite developed, commentators largely have overlooked university involvement in patent litigation. This article focuses on one aspect of that involvement—initiation of patent infringement litigation—by providing a quantitative and textual analysis of patent infringement actions initiated by universities from 2009 through 2010. Suing for-profit actors for money may seem antithetical to the mission of not-for-profit universities, but in fact universities filed over fifty such cases in the studied time period. Examination of these cases reveals a remarkable
similarity between the litigation behavior of universities and for-profit actors, as well as complex and varied relationships between universities, their licensees, and research foundations closely affiliated with universities. These findings situate within a larger conversation over the commercial, political, and social implications of science, education, and innovation and suggest that further attention to the activity is warranted, given the substantial public investments in both public and private higher education that result in patentable inventions.


The patent system is more widely debated and criticized now than at any time since the 19th century. Predictably this produces more heat than light. Growth on the scale the system has seen in recent years must challenge received certainties. Current analytical priorities seem well focused, but there is lack of courage, clear ideas about how to respond and develop the system rather than patch it, and a willingness to shape change rather than be shaped by it.

Copyright and Trademark


The article explores the relationship between copyright and freedom of speech in the Internet environment. After highlighting the constitutional dimension of these conflicting rights, the phenomenon of file sharing and the role of Internet Service Providers (ISPs), the author analyses the debate surrounding a particular sanction used in certain jurisdictions to punish unauthorized on line sharing of copyrighted material, i.e. the disconnection of Internet access. The increasingly important role played by private agreements between copyright holders and ISPs is also highlighted. A set of proposals aiming at identifying possible areas of freedom for unauthorized file sharers are then analysed. In particular, the author believes that file sharing technologies may boost the exchange of information, opinions and ideas amongst Internet users and foster a number of values underpinning the very protection of free speech. It is for this reason - the author argues - that copyright rules might be relaxed when it comes to file sharing technologies, e.g. by transforming copyright from a ‘proprietary’ to a ‘compensation’ right.


Many recording artists and songwriters never reap the rewards of their work. America’s first professional songwriter died in poverty at the age of thirty-seven. At the Congressional level the situation has described recording artists as ‘one group of creators who get ripped off more than anybody else in any other industry’. As one approaches 2013, there will be a new line of cases that deal with authors of sound recordings attempting to terminate their copyright assignment to the record companies. While the most efficient and frugal solution would be legislative action, the most probable outcome is expensive, fact-intensive litigation. Congress and the Supreme Court have emphasized the value of predictability in copyright ownership. In this situation, Congress has fallen short of that goal. Sound recordings do not fit the definition of work made for hire under the 1976 Copyright Act. While analysing the 2013 terminations, courts should not overlook the congressional intent of creating an inalienable termination right for authors.


This article discusses the changes independent Internet policy is imposing upon trademark law. The article's argument centres on the idea that the polymorphous nature of the trademark right is slowly drifting away from the traditional notions of goodwill and consumer protection; instead and because of the nature of domain names, existing and new policies focus on the protection of the word, creating an anti-competitive and hostile environment for users and entrepreneurs. This article elaborates on the thesis that the trademark right is being distorted through ICANN's UDRP in three critical ways: by paying emphasis on the protection of words, by simplifying the confusion test and by dismissing the 'fair use' doctrine. Especially, in relation to the latter, the article suggests that the UDRP itself along with UDRP
panels fail, on the one hand, to protect critical speech whilst, on the other, redefine the nominative fair use of the mark.


This article considers how to balance the benefits to consumers and to creators of intellectual property from enforcing exclusive rights with the benefits to consumers and to competitors from permitting free-riding in the context of resale of trademarked goods. Exclusive rights limit the incentive-undermining effect of one person reaping the benefits of another’s investment without paying. The first sale rule in copyright, patent, and trademark law complements the rationale for exclusive rights. Once a person has paid the price demanded by the rights-holder for the article embodying the expression, invention, or source-indicating symbol, the free-riding concern has normally been addressed. The first sale rule permits the buyer to resell that article. Consumers of intellectual property benefit from encouraging the fixation of original expressions, disclosure of novel and non-obvious inventions, and promulgation of symbols indicating the source, qualities, and characteristics of products. Trademarks are unique because consumers retain an interest in maintaining creators’ exclusive rights to source-indicating symbols beyond providing an incentive to produce the information. To ensure continuity in a symbol’s ability to distinguish one supplier’s goods from others and protect consumers’ ability to locate goods that satisfy their needs in the future, the law limits buyers’ rights to resell goods bearing others’ marks. Consumers may be misled if trademark goods are modified, repackaged, or incorporated into other goods that are then resold with the trademark affixed. Stimulated by a 2010 Ninth Circuit opinion prohibiting such resales even if buyer is not confused, this article explores the proper scope of the trademark first sale defense.


Two main issues pertaining to geographical indications (GIs), namely the establishment of a multilateral system of notification and registration of GIs for wines and spirits, and the extension of higher protection of GIs to other products, as debated under the World Trade Organization (WTO), have been addressed. The first issue encompasses three schools of thought representing three different positions taken by members of WTO. These are: the mandatory registration approach; the voluntary registration approach; and the alternative approach. The second issue pertaining to the extension embodies two schools, namely proponents of extension and opponents of extension. Each approach has its own merits and shortcomings. Little progress has been seen since the positions of countries have not evolved much. These positions, in the view of the author, should be determined by the economic benefits that may derive from the system to be put in place rather than by political gain. A more pragmatic approach is required as protection is not the end by itself. Branding and national policies/strategies to promote local products are required. Economic studies are required to access the economic cost/benefit of each approach.