



# IP Literature Watch

CRA Charles River  
Associates

March 2017

This newsletter contains an overview of recent publications concerning intellectual property issues. The abstracts included below are as written by the author(s) and are unedited.

## IP & Antitrust

### **The Lundbeck case and the concept of potential competition**

Sandra Marco Colino (The Chinese University of Hong Kong (CUHK) – Faculty of Law)

Niamh Dunne (London School of Economics & Political Science (LSE))

Knut Fournier (Leiden University – Leiden Law School; City University of Hong Kong (CityUHK) – School of Law)

Sofia Pais (Catholic University of Portugal (UCP) – Centro de Estudos e Investigação em Direito (CEID))

Derek Ritzmann (Compass Lexecon)

*Conurrences Review*, No. 2, 2017

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2931411](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2931411)

Antitrust rules have been brought into play in situations whereby a company tries to prevent, or at least delay, the entry into the market of potential competitors. This issue has become strikingly prominent in the context of patents and intellectual property (IP) rights in the pharmaceutical industry. Patent holders of a drug, or drug originators, sometimes enter into a ‘reverse payment agreement’ with generics manufacturers, which involves paying the latter to settle prospective patent litigation. The sum agreed might also cover delaying the entry of the generic version of the drug into the market (‘pay-for-delay’ settlement). Delaying the entry of would-be competitors would almost certainly entail pushing back the benefits typically derived from a competitive market, the very ones that competition law was designed to protect. And yet the fact remains that, when reverse payment agreements are entered into, the generics manufacturers are not actual competitors of the patent holder. Unless they infringe the IP rights of the originator, the generic version of the drug will only hit the market once the basic patent is no longer in force. To what extent, therefore, should the application of competition extend to a future threat which may never materialise? This paper brings together a panel of experts in order to analyse these fascinating issues, recently highlighted by the General Court’s judgment in the Lundbeck case.

## **How antitrust enforcement can spur innovation: Bell Labs and the 1956 consent decree**

Martin Watzinger (Ludwig Maximilian University of Munich)

Thomas A. Fackler (Ludwig Maximilian University of Munich)

Markus Nagler (Ludwig Maximilian University of Munich)

Monika Schnitzer (University of Munich – Department of Economics; Centre for Economic Policy Research (CPER))

*CESifo Working Paper Series No. 6351*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2938960](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2938960)

We study the 1956 consent decree against the Bell System to investigate whether patents held by a dominant firm are harmful for innovation and if so, whether compulsory licensing can provide an effective remedy. The consent decree settled an antitrust lawsuit that charged Bell with having foreclosed the market for telecommunications equipment. The terms of the decree allowed Bell to remain a vertically integrated monopolist in the telecommunications industry, but as a remedy, Bell had to license all its existing patents royalty-free. Thus, the path-breaking technologies developed by the Bell Laboratories became freely available to all US companies. We show that in the first five years compulsory licensing increased follow-on innovation building on Bell patents by 17%. This effect is driven mainly by young and small companies. Yet, innovation increased only outside the telecommunications equipment industry. The lack of a positive innovation effect in the telecommunications industry suggests that market foreclosure impedes innovation and that compulsory licensing without structural remedies is ineffective in ending it. The increase of follow-on innovation by small and young companies is in line with the hypothesis that patents held by a dominant firm act as a barrier to entry for start-ups. We show that the removal of this barrier increased long-run U.S. innovation, corroborating historical accounts.

## **Unraveling the conundrums of running royalties in cross-border patent license agreements**

Mizuki Hashiguchi (Oh-Ebashi LPC & Partners)

*les Nouvelles – Journal of the Licensing Executives Society, Volume LII No. 1, March 2017*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2896187](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2896187)

Adjacent to the glorious and delicate stained glass of Sainte-Chapelle, stands the magnificent “Palace of Justice,” currently housing the Court of Appeal of Paris. In *Genentech v. Hoechst*, the court encountered an enigma involving patent royalties and European competition law. A license agreement licensed three patents. One patent was subsequently revoked. The other two patents were later found not to be infringed by the licensee. Yet, the license agreement imposed an obligation on the licensee to pay running royalties throughout the contractual term. Is the imposition of this obligation permitted under Article 101 of the Treaty on the Functioning of the European Union?

The Court of Appeal of Paris referred this question to the Court of Justice of the European Union. On July 7, 2016, the Court of Justice of the European Union issued a judgment answering the question in the affirmative.

Analyzing the judgment in comparison with legal precedent in the United States such as *Kimble v. Marvel Entertainment* evinces differing judicial approaches to interpreting license agreements and discerning the parties’ commercial intent when royalty payments and patent monopoly are at issue. Similar cases in the United States, France, and Japan provide practical guidance concerning the licensees’ obligation to pay royalties and whether licensees are entitled to a refund when the licensed patents are ultimately invalidated.

# IP & Innovation

## Patents, prizes, and property

Ted M. Sichelman (University of San Diego School of Law)

*Harvard Journal of Law and Technology*, Vol. 30, pp. 279-297, 2017

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2930140](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2930140)

The traditional view is that patents and prizes stand in stark contrast to one another as means for promoting innovation. On this view, patents are government grants of private property rights that result in market-based, ex post rewards for innovative activity in the form of supracompetitive pricing. Prizes are awards determined ex ante by public regulators in exchange for placing the innovation into the public domain. Recently, several commentators have questioned this dichotomy, noting that patents and prizes can function economically in quite similar ways. Although there is much value in this insight, the property-based remedies that often flow from patent infringement can result in important distinctions between patents and prizes. These differences in turn may have substantial effects on the innovative process. Nonetheless, patents should still generally be classified as regulatory tools used by governments to achieve the social end of innovation. To be certain, legal exclusivity — like other regulatory tools — may be effected via private property rights to economize on information and administrative costs. Yet, the theoretical justifications for patents, which primarily sound in promoting social aims, should not be confused with the aims of traditional areas of private law — such as real property, contract, and tort — which, to a much more notable degree, protect individual interests.

## Patenting motives, technology strategies, and open innovation

Marcus Holgersson (Chalmers University of Technology; Stanford University; Göteborg University – School of Business, Economics and Law)

Ove Granstrand (Chalmers University of Technology)

*Management Decision*, Forthcoming

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2926680](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2926680)

**Purpose:** The purpose of this study is to empirically investigate firms' motives to patent in general, and more specifically how some of these motives depend upon firms' technology strategies and especially their level of open innovation.

**Design/methodology/approach:** The paper is based on a questionnaire survey sent to CTOs (or equivalent) of the largest R&D spenders among Swedish large firms (e.g., ABB, AstraZeneca, Ericsson, and Volvo) and among Swedish small and medium-sized enterprises. Principal component analysis and multiple linear regressions were used to check the impact from open innovation upon the importance of 21 different motives to patent, with a specific focus on protection and bargaining related motives.

**Findings:** The most important motive to patent is to protect product technologies, but protecting freedom to operate is almost as important, followed by a number of other motives. Increasing importance of open innovation in firms is related to stronger bargaining motives to patent, and even stronger protection motives. In fact, when comparing with closed innovation the results show that open innovation is more strongly positively related with all different motives to patent except for one (to attract customers). This indicates that firms find it more important to patent when engaged in open innovation than when engaged in closed innovation.

Originality/value: The paper reports results from the first study that links patenting motives to technology strategies. It contributes to an emerging stream of empirical studies investigating the role of patents in external technology strategies and open innovation, showing that the motives to patent are strengthened within open innovation settings.

## IP & Litigation

### Fixing forum selling

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*University of Miami Business Law Review, Forthcoming*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2927562](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2927562)

“Forum selling” is jurisdictional competition intended to attract litigants. While consensual forum selling may be beneficial, non-consensual forum selling is harmful, because it encourages jurisdictions to adopt an inefficient pro-plaintiff bias. In the last 20 years, the Eastern District of Texas has adopted an aggressive and remarkably successful policy of non-consensual forum selling in patent infringement actions. In 2015, 44% of all patent infringement actions were filed in the Eastern District of Texas, and 93% of them were filed by patent assertion entities or “patent trolls.”

In December 2016, the Supreme Court granted certiorari in *TC Heartland v. Kraft*, to consider the definition of corporate residence for the purpose of patent venue. If the Court adopts the narrow definition suggested by *TC Heartland*, it would effectively prevent the Eastern District of Texas from engaging in non-consensual forum selling in patent actions. However, it could also unduly restrict patent venue. This essay argues that the Court could stop non-consensual forum selling in patent actions by requiring district courts to decide motions to transfer venue before ordering discovery and stay discovery pending appeal of that decision. This would not only stop non-consensual forum selling in patent actions without limiting the scope of patent venue, but also prevent non-consensual forum selling from arising in other kinds of actions. And it would make litigation more efficient by ensuring that actions reach the appropriate district as quickly as possible.

### What to buy when forum shopping? Analyzing court selection in patent litigation

Fabian Gaessler (Max Planck Institute for Innovation and Competition)

Yassine Lefouili (University of Toulouse 1 – Toulouse School of Economics (TSE))

*TSE Working Paper No. 17-775*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2931351](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2931351)

This paper examines court selection by plaintiffs in patent litigation. We build a forum shopping model that provides a set of predictions regarding plaintiffs’ court preferences, and the way these preferences depend on the market proximity between the plaintiff and the defendant. Then, using a rich dataset of patent litigation at German regional courts between 2003 and 2008, we estimate the determinants of court selection with alternative-specific conditional logit models. In line with our theoretical predictions, our empirical results show that plaintiffs prefer courts that have shorter proceedings, especially when they compete against the defendants they face. Further, we find negative effects of the plaintiff’s, as well as the defendant’s, distance to court on the plaintiff’s court selection. Our empirical analysis also allows us to infer whether plaintiffs perceive a given court as more or less pro-patentee than another one.

## Litigation of standards-essential patents in Europe: a comparative analysis

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Fabian Gaessler (Max Planck Institute for Innovation and Competition)

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Brian J. Love (Santa Clara University School of Law)

*Berkeley Technology Law Journal, Forthcoming*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2927193](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2927193)

Despite the significance of patent litigation in the EU and the looming structural overhaul of the European patent litigation system, there has been comparatively little empirical or statistical analysis of European patent cases across member states. This absence has largely been due to the lack of harmonized case-level data across European jurisdictions. Over the past few years, however, researchers in Europe have developed patent litigation databases that have enabled robust quantitative analysis. As a result, comparative empirical studies have recently been published concerning European patent litigation overall, as well as litigation by so-called non-practicing entities (NPEs). The present study extends this work to the important area of litigation relating to standards-essential patents (SEPs) in the EU. We find that the assertion of SEPs has occurred in Europe at significant levels, and that PAEs are playing a large role in this activity.

## Patient patents

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*UCLA School of Law, Law-Econ Research Paper No. 17-05*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2925417](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2925417)

Believe it or not, a large number of patent cases are today being litigated too quickly. Given the lumbering pace of litigation in general and the premium typically placed on speed in particular, this claim might seem implausible. But, in patent law, short litigation delays can significantly improve judicial accuracy; and, thanks to a recent change in the Supreme Court's patent law jurisprudence, short delays are today significantly less costly than they previously were. What changed? Remedies. Prior to the recent Supreme Court intervention, a successful patent plaintiff would almost always be awarded an injunction that would prevent the defendant from continuing to use the patented technology after trial. Today, by contrast, meritorious patent plaintiffs are often denied injunctive relief and awarded, instead, court-ordered ongoing royalties. This change was made for a variety of legal and policy reasons that have nothing to do with the pace of litigation. But this change turns out to meaningfully reduce the cost of delay. After all, delay is costly in cases that might potentially involve injunctions because, in those cases, every extra day stuck in litigation is another day during which the accused infringer might wrongfully be using the patented technology. However, in cases where injunctions will not issue regardless of the ultimate legal outcome, delay raises no comparable concern. At worst, delay takes a day for which the accused infringer would have been paying a court-ordered ongoing royalty and transforms it into a day for which the accused infringer will instead pay court-ordered backward-looking damages. Either way, the infringer is paying a fee. Either way, that fee is determined by the court. The only difference is the legal label attached to the bill. As a result, these cases – cases where injunctions are not going to be awarded even if the patent holder wins on the merits – are the ideal candidates for which to consider tailored, accuracy-enhancing litigation delay.

# IP Law & Policy

## **Compensatory remedies in EU law: the relationship between EU law and national law**

Dorota Leczykiewicz (University of Oxford)

*Paula Giliker (ed), Research Handbook On EU Tort Law (Edward Elgar 2017)*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2931892](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2931892)

The chapter investigates the complex interaction between EU law and national rules on compensatory remedies. It starts by explaining the problems lying behind the use of the label of 'EU Tort law', which is not a recognised category and generates confusion unless some independent definition of the concept of 'tort law' is selected. The chapter proposes to define 'tort law' by reference to the function of the examined rules, and in particular to the function of regulating compensatory remedies. Following this definition the chapter discusses the different ways in which EU law regulates compensatory remedies; first, by looking at EU competence to regulate compensatory remedies in its two guises, legislative and judicial, and then by examining the different modes in which the EU regulates compensatory remedies. It argues that these modes could be classified in a three-fold manner:

- 1) as involving complete harmonisation,
- 2) as involving only partial harmonisation, where national provisions constitute gap-fillers and/or provide residual rules, and
- 3) as involving only rudimentary harmonisation, where EU law provides merely regulatory standards and the link between their breach and a compensatory obligation is established by national law.

In terms of the substantive content, the chapter looks at EU rules governing damages actions for breach of competition law, liability for damage caused by products, the Fracovich remedy, damages for infringements of intellectual property rights, and the relevant rules in consumer Directives. The chapter concludes by discussing briefly the consequences of codifying private law at the EU level for the continued applicability of national rules on compensatory remedies in the sphere covered by the 'scope of EU law'.

## **Intellectual property proliferation: strategic roots and strategic responses**

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*CIGI Papers No. 121, Centre for International Governance Innovation, March 2017*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2938766](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2938766)

Intellectual property (IP) is essential for commercialization in the knowledge-based economy. However, the creation of intellectual property rights (IPRs), which were originally developed for a world of sparse and sporadic invention, has led to potential stumbling blocks for industrialized research and development (R&D) and continuous and massively parallel innovation. This potential has been actualized through the untrammelled proliferation of IPRs in recent decades. This paper argues that this proliferation has strategic roots at the national level, based on the potential to capture global rents through the internationalization of IPRs. This gives rise to a collective action problem for exit strategies, which, in turn, requires strategic solutions. The key protagonists are the United States and China. For the United States, the post-1980 focus on IP development was perceived to be a game-changing economic policy decision, and the enhancement of IPR protection became a central feature of its international commercial policy.

China, which made technological progress the cornerstone of its economic modernization policy, has long since passed the point where its national interests lay principally in minimizing payments to foreign technology, and has become the most prolific issuer of patents, with a growing potential to appropriate payments to itself. China's emergence in this area creates the rivalry conditions that could underpin a mutual retreat from the current regime, which is damaging growth globally but generating large rents for vested interests, including by raising barriers to entry. In a rules-based system, a World Trade Organization (WTO) agreement, championed by the United States and China, modelled conceptually on the Strategic Arms Limitation Treaty (SALT) agreement between the United States and the Soviet Union, would establish disciplines on the creation of IP, provide for a timely retirement of non-performing IP (modelled on mutual tariff elimination under the General Agreement on Tariffs and Trade [GATT]) and establish an international IP court for the adjudication of cross-border infringement claims. This would reduce innovation costs, in particular for start-ups, address the "tragedy of the anti-commons", and contribute to the policy reforms required to address the "stag-deflation" to which IP proliferation has been a contributing factor.

### Cancer's IP

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*North Carolina Law Review*, Vol. 96, Forthcoming

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2928241](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2928241)

Recent efforts to cure cancer — in particular, the recent funding of a "Cancer Moonshot" — have focused on employing public-private partnerships, joint ventures between private industry and public agencies. Yet, the goal of public-private partnerships like the Cancer Moonshot centers on the production of public goods: scientific information. Using private incentives in this context presents numerous puzzles for both intellectual property law and information policy. This Article examines whether — and to what extent — intellectual property and information policy can be appropriately tailored to the goals of public-private partnerships. It shows that the success of the Cancer Moonshot, and other similar public-private partnerships, turns on data-sharing — the production, disclosure, and ultimate use of data. Consequently, encouraging private participation in datasharing will likely require some form of patents, trade secrets, and regulatory exclusivities, appropriately limited to further the program's public aims. The Article concludes by using the Cancer Moonshot to draw broader lessons about public-private partnerships, generally, including considerations of data privacy, scientific reproducibility, and transaction costs.

## Copyright Law

### Rise of the API copyright dead?: An updated epitaph for copyright protection of network and functional features of computer software

Peter S. Menell (University of California, Berkeley – School of Law)

*UC Berkeley Public Law Research Paper No. 2893192*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2893192](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2893192)

After a decade of bruising legal battles, the courts and software industry norms largely resolved the costly war over the scope of copyright protection for computer software. By the mid 1990s, freedom to develop interoperable devices, systems, and software triumphed over broad copyright protection for network features of computer software. Copyright peace prevailed throughout the software industry for the next 15 years. But in 2010, Oracle reignited the smoldering embers of that war when it brought suit alleging that Google infringed copyright in the Java application program interface packages (APIs)...

This article updates and expands upon an earlier “epitaph” for copyright protection of network features of computer software to address the second API copyright wave. As background, Part I reviews the first wave of API copyright legislation and litigation. Part II examines the Oracle v. Google litigation, tracing the development of Java and Android and the subsequent (and still ongoing) battle over the scope of copyright protection for APIs. Part III critically analyzes the Oracle v. Google decisions. It explains that copyright law’s fundamental exclusion of protection for functional features dictates that the labeling conventions and packaging of functions within interface specifications generally fall outside of the scope of copyright protection even as implementing code garners thin copyright protection. This interpretation of copyright law comports with fundamental principles channeling protection among the modes of intellectual property. It also serves the larger goals of intellectual property law and competition policy.

### **‘User-generated-content and copyright: the European Union approach’**

Andrea Giulia Monteleone (LUISS Guido University, Faculty of Law)

*WIPO Academy, University of Turin and ITC-ILO - Master of Laws in IP - Research Papers Collection - 2015-2016*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2922225](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2922225)

The development of the so-called Web 2.0 caused a shift from a passive use of the Internet to an active role of the user that implied the transformation of the simple user in creator so that each and every user can easily be a creator. This is the reality at the origin of the diffusion of User-Generated-Content (UGC). In fact, UGC implies a massive creation of new material constantly published on the net and generally based on pre-existing material, being an adaptation or modification of the same.

This paper is intended to understand why the European Union approach to the regulation of this new kind of content production is still uncertain. Firstly the background of the consultation launched by the European Union Commission will be analyzed together with the phenomenon. Then, in the second and third paragraph the rights involved and the three possible alternative solutions will be examined. Finally, the aspects that remained unheeded will be quickly reviewed. This analysis is aimed to understand such approach and the reasons why it lead to a substantial failure of the attempt to regulate an incredibly complex and massive instrument of creation (and infringement) of copyrighted material.

### **The maker movement: copyright law, remix culture and 3D printing**

Matthew Rimmer (Queensland University of Technology (QUT))

*(2017) 41 (2) The University of Western Australia Law Review 51-84*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2910832](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2910832)

3D printing is a process of making physical objects from three-dimensional digital models. 3D printing is a form of additive manufacturing – rather than a traditional form of subtractive manufacturing. 3D printing is a disruptive technology, which promises to transform art and design, science and manufacturing, and the digital economy.

The Minister for Industry, Innovation and Science, the Hon. Christopher Pyne, has highlighted the key role of 3D printing for manufacturing and material science in Australia: ‘Manufacturing remains a key driver in our economy, but as the industrial landscape changes, the sector needs to transition to more innovative and economically viable technology.’ Pyne stressed: ‘Emerging technologies such as metal 3D printing offer huge productivity gains and have the potential to turn Australia’s manufacturing industry on its head.’ Likewise, the Australian Labor Party’s Tim Watts and Jim Chalmers have discussed the role of 3D printing in respect of intellectual property, innovation, and trade.

There have been a number of early cultural texts on the topic of 3D printing. Cory Doctorow's 2009 fictional story *Makers* was significant in promoting the culture of the maker community. Chris Anderson's 2012 non-fiction work *Makers* considered the history of the industrial revolution, the rise of 3D printing, and the long tail of things. His work also reflects upon the development of open licensing and open hardware, and the financing of maker businesses. This rather evangelical work helped inspire wider public interest in the field. In *The Maker Movement Manifesto*, Mark Hatch, the CEO of TechShop, provides a practical guide to the applications of 3D printing, and the development of communities of practice. He is particularly interested in the development of distributed and flexible manufacturing, and the acceleration of innovation. The engaging 2014 Lopez and Tweel documentary *Print the Legend* provided a portrait of the emergence of 3D printing start-up companies in the United States. In 2014, the Australian journalist and cultural critic Guy Rundle also undertook fieldwork in his study on 3D printing and robotics, visiting key hubs of 3D printing in the United States. In his work upon the robotics revolution, Martin Ford has explored the intersection between 3D printing and automation. Futurist Jeremy Rifkin has been interested in the intersections between 3D printing, the Internet of Things, and collaborative capitalism. Likewise, Robin Chase has been concerned about how 3D printing fits into a larger model of the sharing economy.

In terms of legal writing in respect of 3D printing, a number of works have sought to address the relationship between intellectual property and 3D printing. As a public policy expert at Public Knowledge, and as a lawyer working for Shapeways, Michael Weinberg (2010, 2013) has written a number of significant treatises on intellectual property and 3D Printing. Associate Professor Dinusha Mendis and her colleagues have undertaken legal and empirical research on intellectual property and 3D printing for the United Kingdom Intellectual Property Office. In 2015, Professor Mark Lemley from Stanford Law School observes, 'A world in which sophisticated 3D printers are widely available would change the economics of things in a fundamental way.' Amongst other things, he says that 3D Printing provides challenges and opportunities for intellectual property in 'an age without scarcity'. John Hornick has examined the topic of intellectual property and 3D printing from the perspective of a legal practitioner. From Australia, Dr Angela Daly has written on the socio-legal aspects of 3D printing in 2016. The World Intellectual Property Organization in 2015 has sought to investigate 3D printing as a breakthrough technology in terms of emerging developments in respect of intellectual property law, practice, and policy.

There has been much interest in how intellectual property law, policy, and practice will adapt to the emergence of 3D printing and the maker movement. Intellectual property lawyers will have to grapple with the impact of additive manufacturing upon a variety of forms of intellectual property – including copyright law, trade mark law, designs law, patent law, and trade secrets. The disruptive technology of 3D printing will both pose opportunities and challenges for legal practitioners and policy-makers.

Rather than try to survey this expanding field, this article considers a number of early conflicts and skirmishes in respect of copyright law and 3D printing. There has been significant interest in the impact of 3D printing on copyright law and the creative industries. There have been classic issues raised about copyright subsistence, and the overlap between copyright law and designs. There has also been a moral panic about 3D printing facilitating copyright infringement – like peer to peer networks such as Napster in the past. There has been a use of open licensing models such as Creative Commons licensing to facilitate the sharing of 3D printing files. Such battles highlight a conflict between the open culture of the Maker Movement, and the closed culture of copyright industries. In many ways, such conflicts touch upon classic issues involved in 'information environmentalism'. Part II looks at the controversy over *Left Shark*. In particular, it examines the copyright claims of Katy Perry in respect of the *Left Shark* figure. Part III considers questions about scanning. Augustana College tried to assert copyright against a maker, Jerry

Fisher, who was scanning statues of Michelangelo (although copyright had long since expired in such work). Part IV focuses upon copyright law, 3D printing and readymades. The Estate of Marcel Duchamp lodged a copyright protest over a 3D printed set of chess, based on the work of Marcel Duchamp. Part V examines the intervention of a number of 3D printing companies in a Supreme Court of the United States dispute in *Star Athletic v. Varsity Brands*. Part VI considers copyright law and intermediary liability. Part VII examines the operation of technological protection measures in the context of copyright law and 3D Printing.

### **Music as a matter of law**

Joseph Fishman (Vanderbilt University – Law School)

*Harvard Law Review*, Vol. 131, 2018 Forthcoming

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2931091](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2931091)

What is a musical work? Philosophers debate it, but for judges the answer has long been simple: music means melody. Though few recognize it today, that answer goes all the way back to the birth of music copyright litigation in the nineteenth century. Courts adopted the era’s dominant aesthetic view identifying melody as the site of originality and, consequently, the litmus test for similarity. Surprisingly, music’s single-element test has persisted as an anomaly within the modern copyright system, where typically multiple features of eligible subject matter are eligible for protection.

Yet things are now changing. Recent judicial decisions are beginning to break down the old definitional wall around melody, looking elsewhere within the work to find protected expression. Many have called this increasing scope problematic. This Article agrees—but not for the reason that most people think. The problem is not, as is commonly alleged, that these decisions are unfaithful to bedrock copyright doctrine. A closer inspection reveals that, if anything, they are in fact more faithful than their predecessors. The problem, rather, is that the bedrock doctrine itself is misguided. Copyright law, unlike patent law, has never shown any interest in trying to increase the predictability of its infringement test, leaving second comers to speculate as to what might or might not be allowed. But the history of music copyright offers a valuable look at a path not taken, an accidental experiment where predictability was unwittingly achieved by consistently emphasizing a single element out of a multi-element work. As a factual matter, the notion that melody is the primary locus of music’s value is a fiction. As a policy matter, however, that fiction has turned out to be useful. While its original, culturally-myopic rationale should be discarded, music’s unidimensional test still offers underappreciated advantages over the “everything counts” analysis that the rest of the copyright system long ago chose.

## **IP & Consumer Protection**

### **The reemergence of state anti-patent law**

Camilla Alexandra Hrdy (University of Akron School of Law)

*Working paper*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2925588](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2925588)

The majority of states have now passed laws prohibiting bad faith assertions of patent infringement. The laws are heralded as a new tool to protect small businesses and consumers from harassment by so-called patent trolls. But state “anti-patent laws” are not a new phenomenon. In the late nineteenth century, many states passed regulations to prevent rampant fraud by patent peddlers who aggressively marketed fake or low value patents to unwitting farmers. However, courts initially held the laws were

unconstitutional. Congress, courts reasoned, had power under Article I, Section 8, Clause 8 to “secure” patent rights. If states could tax patents or alter the terms on which patents were sold and enforced, this risked destroying a federal property right and nullifying an Article I power. In the early twentieth century, the U.S. Supreme Court finally held that states retained some authority to regulate, and to tax, patent transactions. But the Court made clear that states could never impose an “oppressive or unreasonable” burden on federal rights. The Federal Circuit has completely ignored this preemption law. But it has never been overruled and must be consulted today in assessing the constitutionality of states’ current efforts to combat patent trolls.

## IP & Trade

### **Trade agreements, patents, and drug prices: continuing the debate**

Amy Kapczynski (Yale University – Law School)

Bhaven N. Sampat (Columbia University – Mailman School of Public Health)

Ken Shadlen (London School of Economics and Political Science)

*Working paper*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2933574](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2933574)

The upward-ratcheting of patent protection through trade agreements has generated significant concerns about potential effects on prices of drugs and access to medicines in developing countries. The Trans-Pacific Partnership (TPP) included even more extensive pharmaceutical patent provisions than any before. While President Trump withdrew the US as a signatory to the TPP, the potential for new trade agreements to raise the same set of concerns generated by the TPP remains high. Previous work assessing the TPP argued that new data on pharmaceutical expenditures (and other measures) from countries with recent trade agreements with the U.S. indicated that concerns about pharmaceutical patent protection and drug prices are overblown and it may be time to move on from these debates. Here we argue that the analysis supporting these claims is misleading because it fails to look at the right drugs at the right points in time, overlooks the temporal dimensions of implementation of provisions in previous trade agreements, and ignores the broader context in which trade agreements are negotiated and implemented. Much more empirical work is needed to understand the impact of previous trade agreements, and the effects of stronger patent protections in developing countries on innovation, access, and prices. Some of the crucial analyses may not be possible until the provisions in the agreements take full effect, which could take some time especially in developing countries where patenting is relatively new.

### **Ethical and procedural barriers to accessing critical medicines in least developed countries: a look at TRIPS and the Doha Documents**

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*Journal of Gender, Race and Justice, Vol. 20, No. 1, 2017*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2925887](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2925887)

The Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement) came into effect in 1995, in order to standardize intellectual property rights internationally. Since its adoption, nearly all of the 161 World Trade Organization (WTO) members have adopted the required minimum standards set forth in the TRIPS Agreement. However, while this standardization has allowed corporations greater return on their patents, it has also created concerns about access to critical medicines in developing and least developed countries. As greater standardization (and enforcement) of intellectual property rights occurs internationally, fewer generics are available, meaning the international price of drugs is

generally higher. As such, individuals in least developed countries are required to pay higher prices for access to critical medicines to treat HIV/AIDS, tuberculosis, malaria, and other critical diseases. Access to these medications could save millions of lives each year.

Although the Doha Documents: the Doha Declaration and the Doha Implementation Agreement sought to rectify this problem of access, on the whole they have been largely unsuccessful. The Doha Documents affirm the right of access, and describe the steps involved in compulsory licensing. Compulsory licensing—which occurs when a government grants a non-patent holder the right to produce a patented medication—may occur under the Doha Documents between a (presumably) developed and least developed country. Under such an agreement, the developed country may manufacture the critical medicine, and export it to a least developed country. However, there are many procedural hurdles to such a partnership, and countries considering compulsory license have been subject to immense pressure by pharmaceutical corporations. Consequently, there has only been one attempt to utilize the compulsory licensing provisions of the Doha Implementation Agreement.

These strong international patent rights are justified by most philosophical approaches to intellectual property rights. For example, utilitarianism, labor theory, personality theory, and social planning theory all (to varying degrees) support patent rights—and thus the pharmaceutical corporations' right to enforce their patents. However, elements of the personality theory and social planning theory, as well as the human right to health care sit in tension with the property right of a patent. Specifically the human right to health care is well-established by several international documents, and although the specific standard of health care may be disputed, generally most agree that at a minimum individuals should have access to critical medicines.

With this tension in mind, a solution should be adopted that both respects the property right of a patent, while also not denying the human right to health care. As such, the strong international intellectual property protection regimes should remain in place. Additionally, the Doha Documents should become more robust, and given the same legal force as TRIPS, so countries can more easily take advantage of the compulsory licensing provisions. Finally, drugs treating critical diseases, i.e. those critical medicines which least developed countries cannot access, should be subject either to cost margins limiting the maximum price, and/or subsidization, which incentivizes research for drugs having comparatively less economic incentive to research.

## Other IP Topics

### **3D printing the road ahead: the digitization of products when public safety meets intellectual property rights—a new model**

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*Cardozo Law Review*, Vol. 38, No. 3, 2017

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2931851](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2931851)

This Article addresses the threats of 3D printing to both the physical and legal world. Not only does 3D printing impact products protected by intellectual property rights, it also poses risk, threats, and challenges to many other regimes, including products governed by product liability and criminal laws, which consequently threatens public safety. 3D printing virtually possesses threats to medical devices

and products, threats to legal and illegal drugs, threats to human organs, threats to the food industry, and to the transportation industry, including cars, trains, and aircrafts. Ultimately, 3D printing also threatens environmental protection, workplace protections, households, and even the government, via 3D printing's potential impact on tax revenue and regulations.

We argue that the legal realm has been caught totally unprepared to address these hazards that 3D printing presents. Long-standing traditional legislation is in many cases irrelevant and inefficient to deal with the 3D printing revolution that sanctions mass production of any product by any person. It is essential that policymakers address this new technology by developing solutions that prioritize intellectual property protection while also being cognizant of the additional threats it poses to society. We propose a new solution. Not only does it help handle the threat to the existing intellectual property regime, but also the threats to public safety in a variety of fields. The new model operates via a framework requiring registration, imprinting (stamping), and activity tracking in such a way that government authorities, intellectual property owners, and other stakeholders can protect their rights without severely limiting the general public's freedom to use 3D printers. The model can be adopted as a whole or only partially (i.e., imprinting and stamping). By adopting our solution, we argue that traditional legal norms can cope with the growing tug-of-war between individual users of 3D printers and intellectual property rights holders. The proposed model requires, on the one hand, amendments to intellectual property laws to accommodate the need for registration and stamping processes, but, on the other hand, once the model is implemented it allows existing laws and other safeguards regarding public safety and product control to continuously govern their regime without becoming irrelevant in the 3D printer era.

### **When artificial intelligence systems produce inventions: the 3A era and an alternative model for patent law**

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*Working paper*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2931828](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2931828)

Currently, robots, Artificial Intelligence and machine learning systems (hereinafter referred to collectively as “AI” or “AI systems”) can create inventions, which, had they been created by humans, would be eligible for patent protection. This study addresses the patentability of these inventions created by AI systems. We argue that traditional patent law has become outdated, inapplicable and irrelevant with respect to inventions created by AI systems. We call on policy makers to rethink current patent law governing AI systems and replace it with tools more applicable to the new (3A) era of advanced automated and autonomous AI systems. Our argument is based on three pillars: the features of AI systems, the Multiplayer Model and the irrelevance of theoretical justifications concerning intellectual property. In order to fully convey the ability of AI systems to create inventions, the article explains, for one the first times in the legal literature, what AI systems are, how they work and what makes them (so) intelligent. This understanding is crucial to any further discourse about AI systems.

We identify eight crucial features of AI systems they are:

- (1) creative;
- (2) unpredictable;
- (3) independent and autonomous;

- (4) rational;
- (5) evolving;
- (6) capable of data collection and communication;
- (7) efficient and accurate; and they
- (8) freely choose among alternative options.

We argue that, due to these features, AI systems are capable of independently developing inventions which, had they been created by humans, would be patentable (and able to registered as patents). The traditional approach to patent law in which policy makers seek to identify the human inventor behind the patent is, therefore, no longer relevant. We are facing a new era of machines “acting” independently, with no human being behind the inventive act itself.

The second pillar of our argument is the Multiplayer Model, which characterizes the long process through which inventions are created by AI systems. The Multiplayer Model, which is also almost absent in the current legal publications, describes the multiple participants and stakeholders, both overlapping and independent, involved in the process, including software programmers, data and feedback suppliers, trainers, system owners and operators, employers, the public and the government. The model conveys that the efforts of traditional patent law to identify a single inventor of these products and processes are no longer applicable.

The third pillar of our argument is the irrelevancy of theoretical justifications such as personality and inventiveness/efficiency to inventions created by AI systems. In contrast to other scholars, we argue that traditional patent law is irrelevant and inapplicable to these situations, that these inventions should not be patentable at all and that other tools can achieve the same ends while promoting innovation and public disclosure. These other, non-patent incentives include commercial tools such as electronic and cyber controls over inventions, first-mover market advantages and license agreements. This proposal serves a gatekeeping function and is superior to a revision of the non-obviousness standard used by other scholars to afford patent protection to inventions by AI systems. In maintaining the traditional patents system by hunting for a “real” human inventor, policy makers exhibit a misunderstanding of advanced technology and AI systems features. We conclude with a discussion of the implications of our analysis for different legal regimes, such as tort, contracts and even criminal law.

### **Shellfish patents krill experimentation: defences for sharing patented aquatic genetic materials**

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(2015) 37(4) *European Intellectual Property Review* 210-224

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2926194](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2926194)

Aquaculture is an emerging field for patents. Defences, however, are a significantly underutilised tool for equitably sharing patented aquatic genetic materials for experimentation and breeding of improved aquatic strains. This article maps the defence landscape, navigates the tensions and gives an insight into how defences can resolve difficulties posed by aquatic genetic materials’ self-replicating and multi-jurisdictional nature.

## Evaluating market reactions to non-practicing entity litigation

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[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2928367](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2928367)

An ongoing debate in patent law involves the role that “non-practicing entities,” sometimes called “patent trolls” serve in the patent system. Some argue that they serve as valuable market intermediaries and other argue that they are a drain on innovation and an impediment to a well-functioning patent system. In this article, we add to the data available in this debate by conducting an event study that analyzes the market reaction to patent litigation filed by large, “mass-aggregator” NPE entities against large publicly traded companies. This study advances the literature by attempting to reproduce the results of previous event studies done in this area on newer market data and also by subjecting the event study results to more rigorous statistical analysis. In contrast to a previous event study, in our study we found that the market reacted little, if at all, to the patent litigation filed by large NPEs.

### About the editor

**Dr. Anne Layne-Farrar** is a vice president in the Antitrust & Competition Economics Practice of CRA. She specializes in antitrust and intellectual property matters, especially where the two issues are combined. She advises clients on competition, intellectual property, regulation, and policy issues across a broad range of industries with a particular focus on high-tech and has worked with some of the largest information technology, communications, and pharmaceuticals companies in the world.

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