



# IP Literature Watch

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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

### **FTC v. Qualcomm: new frontiers in the antitrust-IP interface**

Erik Hovenkamp (Harvard Law School; Yale University - Law School)  
*Working Paper*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3397312](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3397312)

The Federal Trade Commission recently scored a substantial victory in its antitrust suit against Qualcomm. The case represents a novel confluence of standard-setting and IP licensing issues with bedrock antitrust subjects: tying and exclusive dealing. It also takes a surprising turn in resuscitating the long-dormant doctrine of the antitrust “duty to deal.” In this short essay, I review and evaluate the court’s decision in *FTC v. Qualcomm*. The analysis of Qualcomm’s exclusive dealing is sound and very likely correct. However, the court’s duty-to-deal analysis sits on shakier ground, omitting consideration of potential immunity under the Patent Act and sidestepping thorny questions on the appropriate source of law.

## IP & Innovation

### **Patents, information, and innovation**

Brenda M. Simon (University of California, San Diego (UCSD); Thomas Jefferson School of Law; Stanford Law School - Center for Law & the Biosciences)  
*Brooklyn Law Review, Forthcoming*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3393302](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3393302)

The role of patents in facilitating the exchange of information during the innovative process is highly contextual. Although numerous factors can affect the function of patents in encouraging disclosure, including the nature of the technology involved, most of the scholarship in this area has focused on two industries—biotechnology and software. To provide a richer description of the role of patents in the innovative process, this project evaluates the existing literature and sets forth examples drawn from a series of interviews conducted with medical device professionals from small and medium-sized firms.

Although a small number of large corporations dominate the medical device landscape in terms of revenue, most truly innovative devices originate with small to mid-sized medical device companies. These emerging companies often depend on patent protection to help foster communication with investors and negotiate the alliances necessary to commercialize their inventions. By providing a descriptive timeline of the innovative process through a closer examination of the largely-overlooked medical device industry, this Article sets forth a more complete account of the role of patents in the larger narrative of innovation.

### **Visibility of technology and cumulative innovation: evidence from trade secrets laws**

Bernhard Ganglmair (ZEW – Leibniz Centre for European Economic Research - Junior Research Group Competition and Innovation; University of Mannheim - Department of Economics; Mannheim Centre for Competition and Innovation (MaCCI))

Imke Reimers (Northeastern University - Department of Economics)

*Working Paper*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3393510](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3393510)

Patents grant an inventor temporary monopoly rights in exchange for the disclosure of the patented invention. However, if only those inventions that are otherwise already visible are patented (and others kept secret), then the bargain fails. We use exogenous variation in the strength of trade secrets protection from the Uniform Trade Secrets Act to show that a relative weakening of patents (compared to trade secrets) adversely affects the rate of process patents relative to products. By arguing that processes are on average less visible (or self-disclosing) than products, we show that stronger trade secrets have a disproportionately negative effect on the disclosure of inventions that are not otherwise visible to society. We develop a structural model of initial and follow-on innovation to determine the effects of such a shift in disclosure on overall welfare in industries characterized by cumulative innovation. In counterfactual analyses, we find that while stronger trade secrets encourage more investment in R&D, they may have negative effects on overall welfare - the result of a significant decline in follow-on innovation. This is especially the case in industries with relatively profitable R&D.

### **Patents, data exclusivity, and the development of new drugs**

Fabian Gaessler (Max Planck Institute for Innovation and Competition)

Stefan Wagner (ESMT European School of Management and Technology)

*Working Paper*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3401226](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3401226)

Pharmaceutical firms typically enjoy market exclusivity for new drugs from concurrent protection of the underlying invention (through patents) and the clinical trials data submitted for market approval (through data exclusivity). Patent invalidation during drug development renders data exclusivity the sole source of protection and shifts the period of market exclusivity at the project level. Patent invalidation therefore constitutes a natural experiment that allows us to causally identify how the duration of market exclusivity affects firms' incentives to innovate. In instrumental variables regressions we quantify the effect of a one-year reduction in expected market exclusivity on the likelihood of drug commercialization. We provide first estimates of the responsiveness of

R&D investments to market exclusivity expectations and hereby inform the ongoing policy debate on the regulation of intellectual property rights in the pharmaceutical industry.

## IP & Litigation

### **State immunity and the patent trial and appeal board**

Tejas N. Narechania (University of California, Berkeley, School of Law)

*18 Chicago-Kent Journal of Intellectual Property* 537 (2019)

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3388856](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3388856)

Since Congress's enactment of the Leahy-Smith America Invents Act, the power and influence of the Patent Trial and Appeal Board as an adjunct to (or substitute for) patent litigation has steadily grown. And just as the PTAB and district courts both face difficult questions of substantive patent law, many of the difficult jurisdictional and procedural issues that have presented in district court litigation have found counterparts in the PTAB, too. One category of such challenges regards the power of the PTAB to hear claims involving other governmental entities. Are the states immune from the power of the PTAB?

I conclude that they are not. State sovereign immunity jurisprudence suggests at least three reasons why this is so. First, state sovereign immunity is primarily a limit on Article III's federal judicial power. But the PTAB does not exercise such power. Second, the Supreme Court has explained that the Eleventh Amendment's penumbras may also shield states from nonjudicial proceedings that closely resemble an ordinary lawsuit. But inter partes review differs from ordinary litigation in several significant, relevant respects. And, third, these distinctions suggest a more novel basis for subjecting states to the PTAB's jurisdiction. The Supreme Court has repeatedly affirmed the federal government's power to sue the states to protect federal interests. And the federal government has a clear, compelling interest in ensuring that public rights, such as patents, are kept within their legitimate scope. Hence, because inter partes review is instituted by the Director of the Patent Office to cancel patents that may have been granted in violation of federal patent law, the Patent Office may review state-owned patents, state immunity notwithstanding, no less than it can review private patents. Such review helps assure balance between public and private patentees.

### **Testimony before the Senate Judiciary Committee, hearing on the state of patent eligibility in America**

Paul R. Gugliuzza (Boston University School of Law)

*Working Paper*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3402046](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3402046)

This testimony, prepared for a hearing of the Senate Judiciary Committee on the State of Patent Eligibility in America, argues that the eligibility requirement plays a crucial role in reducing litigation costs by giving courts a mechanism to quickly dismiss infringement claims that plainly lack merit. Most patent validity requirements, including novelty, nonobviousness, and adequate

disclosure, are viewed by courts to turn on disputed questions of fact, meaning that they cannot be resolved until after a trial or, at the earliest, shortly before trial on a motion for summary judgment. Eligibility, by contrast, is often viewed to present a question of law, meaning that it can be — and often is — resolved at the earliest stages of the case — before the costly discovery process begins. The legislation currently being considered by the Committee, which would effectively abolish the patent eligibility requirement, would take away a crucial tool courts can use to end particularly weak cases at low cost.

## IP Law & Policy

### **Ships in the night: resolving administrative conflict between FDA- and patent-related legislation**

Carlos Garcia (Eli Lilly & Company)

Jonathan Stroud (Unified Patents Inc.)

*68 Am. U.L. Rev. 1111 (2019)*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3402656](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3402656)

In 2011, the Leahy-Smith America Invents Act altered U.S. patent administrative law, creating three review procedures whereby third parties have means of challenging the patentability of previously-issued patents. Lawmakers established the administrative framework, and policymakers, judges, and executive employees implemented, revised, and altered their procedures to conform. The marketplace and public adjusted their business and personal expectations accordingly.

Unexpected, though, was the Leahy-Smith America Invents Act's profound impact on the carefully balanced administrative schemes involving the approval of biosimilars and generic drugs. The unintended statutory conflicts among three administrative pathways, the Drug Price and Competition and Patent Term Restoration Act, the Biologics Price Competition and Innovation Act, and the Leahy-Smith America Invents Act, have increased costs and complexity in unwarranted ways. Senator Orrin Hatch recently sounded a siren of warning as to the conflicts between these dissimilar ships set to crash into one another.

Principles of administrative comity compel accommodation. So does sound and serviceable administration. While a handful of legislative fixes have been proposed, introduced, revised, debated, and abandoned, to date no one in the literature has identified, discussed, and analyzed that conflict, reviewed the full range of potential solutions, and offered a workable, easily-implementable administrative alternative. We do.

In the interests of promoting generic drug competition, reducing needless litigation costs, and restoring the delicate balance Congress struck between the courts and the administrative state with the abbreviated regulatory/litigation pathways for generic and biosimilar medicines, this Article analyzes the Leahy-Smith America Invents Act, the Drug Price and Competition and Patent

Term Restoration Act, and the Biologics Price Competition and Innovation Act, and looks to the legislative history and analogous district court practice.

This Article recommends that the United States Patent and Trademark Office adopt guidance and policy directing the Patent Trial and Appeal Board to exercise their statutory discretion to deny institution during parallel statutory Drug Price Competition and Patent Term Restoration Act or Biologics Price Competition and Innovation Act litigation. This is all the more judicious after *SAS Institute Inc. v. Iancu*, a Supreme Court decision upholding the United States Patent and Trademark Office Director's authority to issue regulations, and it accords with the other provisions and legislative history of the various acts. This Article offers proposed agency guidance and internal policy recommendations that would provide clarity in an area where it is sorely needed; after all, someone must see the ships safely ashore.

### **U.S. Supreme Court IP cases, 1810–2018: measuring & mapping the citation networks**

Joseph Scott Miller (University of Georgia School of Law)

*Working Paper*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3398391](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3398391)

Intellectual property law in the United States, though shaped by key statutes, has long been a common-law field to a great degree. Many decades of decisional law flesh out the meaning of broad-textured, sparsely worded statutes. Given the key roles of patent law and copyright law, both federal, the Supreme Court of the United States is IP law's leading apex court. What are the major topical currents in the Supreme Court's IP cases, both now and over the course of the Court's work? This study uses network-analysis tools to measure and map the entirety of the Court's IP jurisprudence. It goes deeper than existing studies of judicial citation networks by focusing on a topically defined subnetwork. It goes further than existing studies by analyzing, in addition to basic citation networks, a time series of co-citation networks—using techniques developed within bibliometrics, for mapping a scholarly field's conceptual terrain, to track and describe doctrinal change. Emerging bottom up from the Court's citations, the co-citation map charted here reveals, surprisingly, a core of antitrust and patent-misuse cases (especially from the 1940s) exerting significant influence on IP doctrine.

### **Audits, markets, and patents**

Daniel Jacob Hemel (University of Chicago - Law School)

*87 University of Chicago Law Review Online 78 (2019)*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3390951](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3390951)

The valuation of illiquid assets is a challenge across many areas of law, from tax to torts to takings to intellectual property. The most common approaches to the problem are state assessment and self-assessment. In a state assessment system, some actor or body employed or deputized by the government — such as an assessor, a jury, or a judge — estimates the value of the asset in question, and that state assessment becomes binding (generally after an appeals process has run its course). Examples of state assessment include local property tax valuations,

jury awards in tort cases, court-ordered compensation for takings, and the process for patent and copyright holders to obtain compensation from the federal government when it uses their intellectual property without a license. In a self-assessment system, asset owners or taxpayers report their own valuations of the item in question. Rather than relying on scout's honor, authorities generally subject those self-assessed valuations to random or quasi-random audits and then impose penalties if the self-assessment appears to be self-serving. Examples of self-assessment abound in the federal tax context, including the valuation of in-kind income, noncash charitable contributions, goods and services transferred among affiliated business entities, and gifts and inheritances subject to wealth transfer taxes.

Audits are not the only way that governments can test the accuracy of reported valuations in a self-assessment system. An alternative to an "audit test" is a "market test." In the context of a self-assessed property tax, for example, a market test would allow anyone to purchase the property for the self-assessed price. Following in the footsteps of economist Arnold Harberger, a number of scholars of law and economics have developed detailed and innovative market-test proposals, including Saul Levmore, Lee Fennell, and — most recently — Eric Posner and Glen Weyl.

This Essay revisits the tradeoff between state assessment and self-assessment as well as the choice between market tests and audit tests as mechanisms for policing self-assessment. It observes that a combination of audits and markets will work best when the private sector can gather and process information about valuation more efficiently than the public sector can, and when overvaluation, not undervaluation, is the primary valuation-related concern. These conditions appear to apply to government patent buyouts. The Essay concludes that a hybrid audit/market regime will likely represent an important improvement over existing patent buyout proposals.

### **The Bayh-Dole Act revisited: the impact of intellectual property rights on commercialization of university research**

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Brent D. Goldfarb (University of Maryland - Robert H. Smith School of Business)  
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*Working Paper*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3399626](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3399626)

The National Institute of Standards and Technology (NIST)'s recent ROI Initiative for Unleashing American Innovation has similar goals and assumptions to its predecessor, the Bayh-Dole Act from 40 years ago. Thus, it is worth examining the record of the BDA while the ROI Initiative is still being fleshed out. While research has examined the impact of the BDA using measures collected at universities, universities cannot commercialize innovations, only firms can. Accordingly, we examine the downstream impact of the BDA on commercialization of university research by firms. Using the full set of US public firms who patent and conduct R&D over the period 1976 to 1997, we found no evidence university research protected by IP rights (patents) had higher commercialization relative to university research in the public domain (publications). Indeed, if



anything, university research in the public domain appears to have slightly greater commercialization.

### **Patents and state constitutionally protected speech**

Dan L. Burk (University of California, Irvine School of Law)  
*Duke Journal of Constitutional Law & Public Policy, Forthcoming*  
[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3401714](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3401714)

Recent American patent scholarship has begun to explore the intersection of the patent system and guarantees of expressive freedom, noting that patents may impinge on the First Amendment to the federal constitution to chill or prohibit protected speech. But guarantees of expressive freedom are not limited to the federal constitution; they are also found in state constitutional provisions, some of which offer broader protection than that guaranteed in the First Amendment. In this essay I examine the relationship between federally issued patents and the guarantees of expressive freedom found in state constitutions. State constitutions vary in their wording and interpretation, so my primary focus will be on those states that have viewed their state constitutional provisions as extending beyond the protections offered by the federal First Amendment. While the Supremacy Clause prevents states from overriding federal patent law, I argue here that state constitutional provisions can alter, shape, or even prohibit certain types of patent assertions, just as state law may moderate other uses of personal property. The discussion of this interaction highlights several previously unexplored aspects of the vertical relationship between federal patent policy and state law, and offers an alternative route to vindicating expressive rights encumbered by patents.

## Copyright Law

### **Empirical approaches to intermediary liability**

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*Chapter 5 in THE OXFORD HANDBOOK OF INTERMEDIARY LIABILITY ONLINE (ed. Giancarlo Frosio), Oxford University Press, Forthcoming*  
[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3400230](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3400230)

Legal theory has failed to offer a convincing framework for the analysis of the responsibilities of online intermediaries. The debate is characterized by a wide range of contested issues. This paper considers what empirical evidence may contribute to these debates. What do we need to know in order to frame the liability of intermediaries and, a fortiori, what does the relationship between theory and empirics imply for the wider issue of platform regulation? The core of the paper is a systematic review of existing empirical research on the copyright liability regime established with the Digital Millennium Copyright Act (DMCA 1998) and the EU E-Commerce Directive (2000). Issues examined include the number and accuracy of takedown notices, over-enforcement and abuse, transparency and due process, and finally the allocation of responsibilities and costs.

## Reconceptualizing compulsory copyright licenses

Jacob Victor (NYU School of Law)

*72 Stanford Law Review (2020, Forthcoming)*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3397352](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3397352)

United States copyright law generally assumes that by providing property entitlements in creative works, the free market will balance between two competing priorities: incentivizing creators to produce works and providing the public with access to this content. But the Copyright Act also outlines several detailed compulsory licensing schemes requiring the owners of certain copyright interests, musical works in particular, to license to anyone at government-set prices. Consistent with broader property theory concepts, scholars tend to treat compulsory copyright licenses as liability rules used only to address market failures caused by transaction costs. This Article questions that account, arguing that compulsory licensing also plays an important and underexplored role in furthering copyright's specific goals. A close analysis of the music regulatory regime and its history shows that its primary function has been to recalibrate the balance between creators' financial incentives and public access to expressive works in situations where free market licensing would yield problematic outcomes. Unlike liability rules designed only to address transaction costs, for which regulators generally try to mimic market rates using market proxies, the compulsory music licensing regime traditionally used copyright policy-oriented rate-setting criteria. Applying these criteria, regulators often chose below-market royalty rates in order to allow access-expanding music dissemination technologies—from the player piano to digital radio—to flourish.

In recent years, however, policymakers have begun to lose sight of this access-encouraging role. A series of legislative changes, including the recent Music Modernization Act ("MMA"), have made the compulsory music licensing regime increasingly inconsistent and ill-equipped to handle new forms of music dissemination. Policymakers now seem to view compulsory licensing as only justified in the face of transaction costs-based market failures and, accordingly, have begun privileging market mimicking over copyright policy when choosing royalty rates. This shift has yielded increasingly high royalty rates, which have made it more difficult for new disseminators, such as streaming services, to facilitate access to music.

The Article argues that this shift away from policy-focused compulsory licensing prevents the regime from maintaining balance in the copyright system, a problem that is especially apparent in the experience of the burgeoning music streaming industry. In particular, a copyright policy-based approach is necessary to prevent the subjectivity and manipulability of market-mimicking rate-setting standards from yielding royalty rates that are unworkable for streaming services. Although the MMA has pushed the existing regime even further away from its original role by implementing a market-focused rate-setting standard, the Article suggests how regulators could still further copyright policy goals in future rate-setting proceedings.



### **Contracts mattered as much as copyrights**

Robert W. Gomulkiewicz (University of Washington - School of Law)  
*66 J. Copyright Soc'y U.S.A. (Forthcoming)*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3396100](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3396100)

Scholars have begun to appreciate the fundamental role that contracts played in the development of copyrights. This article explores the network of book publishing contracts that formed the legal infrastructure for a pre-modern “internet” at the dawn of copyright law in Great Britain in the eighteenth century. Drawing on insights from new archival research, the article shows how this network of copyright contracts advanced an important goal of copyright: the spread of ideas and information throughout all parts of society. Appreciating the historical significance of copyright contracts provides valuable context for modern debates about copyright policy. Indeed, contracts matter as much as copyrights in fostering innovation in the modern information economy because contracts enable the beneficial sharing of ideas and information. This insight about contracts is particularly vital for those judges and lawmakers who make decisions about innovation policy, including the scope of copyright law’s first sale doctrine and the enforceability of software license agreements.

## IP & Technology

### **Machine learning at the patent office: lessons for patents and administrative law**

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*Duke Law School Public Law & Legal Theory Series No. 2019-37*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3393942](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3393942)

The empirical data indicate that a relatively small increment of additional USPTO investment in prior art search at the initial examination stage could be a cost-effective mechanism for improving accuracy in the patent system. This contribution argues that machine learning provides a promising arena for such investment. Notably, the use of machine learning in patent examination does not raise the same potent concerns about individual rights and discrimination that it raises in other areas of administrative and judicial process. That said, even an apparently easy case like prior art search at the USPTO poses challenges. The most important generalizable challenge relates to explainability. The USPTO has stressed transparency to the general public as necessary for achieving adequate explainability. However, at least in contexts like prior art search, adequate explainability does not require full transparency. Moreover, full transparency would chill provision of private sector expertise and would be susceptible to gaming.

## Artificial stupidity

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*61 William & Mary Law Review (2020, Forthcoming)*  
[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3399170](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3399170)

Artificial intelligence is everywhere. And yet, the experts tell us, it is not yet actually anywhere. This is so because we are yet to achieve true artificial intelligence, or artificially intelligent systems that are capable of thinking for themselves and adapting to their circumstances. Instead, all the AI hype — and it is constant — concerns rather mundane forms of artificial intelligence, which are confined to performing specific, narrow tasks, and nothing more. The promise of true artificial intelligence thus remains elusive. Artificial stupidity reigns supreme.

What are the best set of policies to achieve true artificial intelligence? Surprisingly, scholars have paid little attention to this question. Scholars have spent considerable time assessing a number of important legal questions relating to artificial intelligence, including privacy, bias, tort, and intellectual property issues. But little effort has been devoted to exploring what set of policies are best suited to helping artificial intelligence developers achieve greater levels of innovation. And examining such issues is not some niche exercise, since artificial intelligence has already or soon will affect every sector of society. Hence, the question goes to the heart of future technological innovation policy more broadly.

This Article examines this question by exploring how well intellectual property rights promote innovation in artificial intelligence. I focus on intellectual property rights because these are often viewed as the most important piece of United States innovation policy. Overall, I find that intellectual property rights, particularly patents, are ill-suited to promote radical forms of artificial intelligence innovation. And even the intellectual property forms that are a better fit for artificial intelligence innovators, such as trade secrecy, come with problems of their own. In fact, the poor fit of patents in particular is likely to contribute to heavy industry consolidation in the AI field, and heavy consolidation in an industry is typically associated with lower levels of innovation than ideal. I conclude by arguing, however, that neither strengthening AI patents rights nor looking to other forms of law, such as antitrust, holds much promise in achieving true artificial intelligence. Instead, as with many earlier radical innovations, significant government backing, coupled with an engaged entrepreneurial sector, is at least one key to avoiding enduring artificial stupidity.

## Minds, machines, and the law: the case of volition in copyright law

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Jeanne C. Fromer (New York University, School of Law)  
*Columbia Law Review, Vol. 119, 2019*  
[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3392675](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3392675)

With the increasing prevalence of ever more sophisticated technology — which permits machines to stand in for or augment humans in a growing number of contexts — the questions of whether, when, and how the so-called actions of machines can and should result in legal liability will

become more practically pressing. Although the law has yet to fully grapple with questions like whether machines are (or can be) sufficiently human-like to be the subjects of law, philosophers have long contemplated the nature of machines. Philosophers have considered, for instance, whether human cognition is fundamentally computation — such that it is in principle possible for future artificial intelligences (AI) to possess the properties of human minds, including consciousness, semantic understanding, intention, and even moral responsibility — or if humans and machines are instead fundamentally different, no matter how sophisticated AI becomes. It is thus unsurprising that, in thinking through how the future of the law should accommodate and govern an AI-filled world, the lessons and frameworks to be gleaned from these philosophical discussions will have undeniable relevance.

One important set of questions that the law will inevitably need to confront is whether machines can have mental states, or — at least — something sufficiently like mental states for the purposes of the law. This is because a wide number of areas of law have explicit or implicit mental-state requirements for the incurrance of legal liability. Consider, for example, questions of intent and recklessness versus negligence in tort law; mens rea and actus reus in criminal law; offer and acceptance in contract law; and, as we will see, infringement and authorship in copyright law. In each of these contexts, the law either implicitly or explicitly asks for the presence of some particular mental state on the part of the actors in question. Whether the operations of machines can incur legal liability — and what kind of liability they can incur — thus often turns on whether a machine is to be regarded as operating with the mental state required.

In some contexts, the decision already seems to have been made that machines can never possess the mental states required for liability. Consider copyright law's volitional-act requirement for infringement. Copyright law has generally claimed that machines making copies of protected material lack the requisite volition for this conduct to give rise to legal liability on the part of those responsible for the machine, even when the machine has been designed to make copies, often of copyrighted works. In other contexts, such as criminal and tort law, the question of machines' capacity for mental states remains open and underexplored.

We aim in this Essay to challenge any hasty and blanket generalization that machines cannot have mental states as a legal matter, drawing on philosophical thinking surrounding mental states and using copyright's volitional-act requirement as our case study. In so doing, we conclude that — as a matter of copyright doctrine — a copying technology might be sufficiently “volitional” for the technology provider to be held directly liable for the technology's so-called actions in producing copies; and — as a matter of general legal theory — machines in some contexts might be capable of being sufficiently “mental” to count as agents of the humans behind them, depending on the aims of the area of law in question. Our conclusion is thus not merely of philosophical interest, but one with practical implications for determinations of legal liability. In the context of copyright law, our chosen case study, our conclusion has implications for who is and is not directly accountable for the copying of protected material, and for the law's ability to effectuate its goals of encouraging the creation and dissemination of expressive works.

To mount our challenge, after giving an overview of mental states in the law and the puzzle raised by technological advancement, we recount two of the most influential philosophical discussions on minds and machines, and the resulting theoretical distinction between the conscious and functional properties of mental states. Using this distinction as a framework, we argue that it is an open question whether the law's mental-state requirements seek to track the conscious or merely functional properties of the particular mental state in question, one that depends on the ultimate aims of the relevant area of law. We then defend the view that copyright law's volitional-act requirement might be interested in merely functional properties, which could — in principle — be replicated by machines. Next, we consider which functional properties copyright law might seek to track and what a machine might have to look like to be "functionally volitional" under copyright law, to count as the technology provider's agent, and to thereby give rise to direct liability. These relevant functional properties include the ability to pause and analyze the nature of the work in question before "choosing" to undertake an act of copying, one which might cause exposure to liability. On the basis of this framework, we conclude that machines with the appropriate functionality might satisfy copyright law's volitional-act requirement, thus forming the basis of holding the technology providers directly liable for infringement. Finally, generalizing our framework, we offer preliminary thoughts on machines and mental-state requirements in the contrasting contexts of criminal law and copyright authorship doctrine, as well as a general hypothesis regarding when the law is interested in conscious versus merely functional properties of the mental states in question.

### **Data-centric technologies: patent and copyright doctrinal disruptions**

Tabrez Ebrahim (California Western School of Law)

*Nova Law Review*, Vol. 43, 2019

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3393831](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3393831)

Data-centric technologies create information content that directly controls, modifies, or responds to the physical world. This information content resides in the digital world yet has profound economic and societal impact in the physical world. 3D printing and artificial intelligence are examples of data-centric technologies. 3D printing utilizes digital data for eventual printing of physical goods. Artificial intelligence learns from data sets to make predictions or automated decisions for use in physical applications and systems. 3D printing and artificial intelligence technologies are based on digital foundations, blur the digital and physical divide, and dramatically improve physical goods, objects, products, or systems. Data-centric technologies have crossed national borders and rapidly attained adoption, even while patent law and copyright law have been slow to respond. This Article focuses on 3D printing and artificial intelligence technologies and their doctrinal disruptions through a conceptual matrix formulation. It describes how recent litigation over data-centric technologies has repercussions for creators and inventors in the protection of data-centric innovations. Data-centric technologies' doctrinal disruptions necessitate reevaluation of copyright and patent doctrines, which were spawned in an era of human/physical considerations to now including human/digital, non-human/physical, and non-human/digital considerations. The future of patent law and copyright law will be dominated by non-human/digital considerations and will impact innovation policy.

## Other IP Topics

### **Intellectual property and human rights 2.0**

Peter K. Yu (Texas A&M University School of Law)

*University of Richmond Law Review*, Vol. 53, pp. 1375-1453, 2019

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3394338](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3394338)

Written in celebration of the seventieth anniversary of the Universal Declaration of Human Rights, this article calls for greater methodological engagement to refine existing human rights approaches to intellectual property and to devise new approaches to advance the promotion and protection of human rights in the intellectual property area.

This article begins by briefly recapturing the past two decades of scholarship on intellectual property and human rights. It documents the progress scholars have made in this intersectional area. The article then draws on the latest research on human rights methods and methodology to explore whether and how we can take the academic discourse to the next level. It highlights three dominant research methods that have been used in this intersectional area: comparative methods, quantitative assessments and contextual analyses.

The second half of this article identifies the contributions a robust discourse on intellectual property and human rights can make to the future development of the intellectual property regime, the human rights regime and the interface between these two regimes. Responding to critics and skeptics in the intellectual property field, the article concludes by explaining why human rights discussions in the intellectual property area will provide important benefits to the future development of the intellectual property regime, especially in relation to developing countries.

### **Dead celebrity persona-who owns it?**

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*Working Paper*

[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3372688](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3372688)

Of late, celebrities are exploiting internet medium to earn money from their personas which is famous amongst general public, as they feel their personas is protected under the right of publicity or personality. The right of publicity or personality refers to “the inherent right of every human being to control the commercial use of his or her identity.”<sup>1</sup> As there is no federally protected right of publicity, each state has created its own protections for this intellectual property right.

Use of a person’s persona for commercial gain in an unauthorized manner amounts to a violation of the publicity rights of the person. Any person must, therefore, take permission of a celebrity for using his persona for commercial gain. Such authorization for commercial use forms one of the primary revenue sources of most celebrities. By virtue of their capacity to influence the minds of the public, celebrities endorse commercial products for a fee and generate substantial revenues.

The history of the right of publicity predominantly took momentum in the twentieth century; the Court enjoined the unauthorized use of Thomas Edison's name and picture on a medicine and explained. The New Jersey Court clearly viewed Edison's persona as having tangible value, thereby making it a commodity which Edison owned and could exploit (or refrain from exploiting) as he deemed fit. As such, the unauthorized use of Edison's persona injured him by depriving him of the opportunity to market the commodity himself. Yet, it was not until almost 50 years after the Edison decision that the Second Circuit rendered its decision in *Haelan Laboratories Inc. v. Topps Chewing Gum Inc.*, when the term "publicity rights" actually was coined.

In the case of *Haelan Laboratories, Inc. v. Topps Chewing Gum, Inc.*, the decision Circuit Court of Appeals for the Second Circuit of the United States was rendered in the year 1953, Haelan, a famous baseball player signed an exclusive baseball card contract with one company (Haelan) and then a rival company (Topps) printed cards with pictures of the same player. Thus, the true issue before the Court was whether Haelan, as the assignee, could bring a claim against Topps. The Court decided the issue in the affirmative, and in the process coined the term "right of publicity." However, beyond recognizing a right of publicity for an individual, what Haelan really did was create an alienable property right - a right that could be transferred by, at the least, an assignment.

Though in India, the absence of a statute makes it difficult to recognize and enforce personality rights. There is no statute or law that protects personality rights in India per se. However, judicial precedents developed over a period of time have to a great extent, supported the enforcement of Personality rights in India. Nevertheless, these days India also started recognizing these rights through many significant judgments.

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