

The United States Patent and Trademark Office
and The George Washington University Law School
present

The 2015 Works-in-Progress Intellectual Property Colloquium

February 5–7, 2015
at the
United States Patent and Trademark Office
Madison Building
600 Dulany Street
Alexandria, VA 22314

Schedule of Events

Unless otherwise noted, all events will take place on the premises of the USPTO Global Intellectual Property Academy in the Madison Building.

All participants will have to pass through a security screening and possess a valid government ID. Please allow time for the screening when planning your arrival.

Thursday, February 5

6:30 pm – 8:30 pm Welcome Reception at the National Inventors Hall of Fame and Museum (Madison Building Atrium)

Friday, February 6

8:00 am – 9:00 am Presentation on IP Law & Policy at the USPTO, then Breakfast
9:00 am – 10:40 am First Session
10:40 am – 11:00 am Coffee Break
11:00 am – 12:20 pm Second Session
12:20 pm – 2:00 pm Lunch at the Madison South Auditorium (Concourse Level)
2:00 pm – 3:20 pm Third Session
3:20 pm – 3:40 pm Coffee Break
3:40 pm – 5:00 pm Fourth Session

6:30 pm Reception and Dinner at Il Porto, 121 King Street, Alexandria, second floor. Cash bar; wine served at dinner; music by the WIPIP All-Stars

Saturday, February 7

8:00 am – 9:00 am Presentation on IP at GW Law, then Breakfast
9:00 am – 10:40 am Fifth Session
10:40 am – 11:10 am Coffee Break
11:10 am – 12:30 pm Sixth Session
12:30 pm – 1:00 pm Nourishment Break
1:00 pm – 2:20 pm Seventh Session

Works-in-Progress Intellectual Property (WIPIP) 2015: Schedule of Presentations as of 2/3/2015

FRIDAY, February 6, 2015				
Session 4: 3:40—5:00	Session 3: 2:00—3:20	Session 2: 11:00—12:20	Session 1: 9:00—10:40	
<p>Cross-IP</p> <ul style="list-style-type: none"> • Mark Lemley (& Mark McKenna), Scope • Ari Waldman, Trust: The Distinction Between the Private and the Public in IP Law • Jessica Silbey, IP and Constitutional Equality • Gregory Mandel (& Kristina Olson & Anne Fast), What People Think, Know, and Think They Know About IP 	<p>Patent—Claims</p> <ul style="list-style-type: none"> • Adam Mossoff, O'Reilly v. Morse • Joseph Scott Miller, Reasonably Certain Notice • Oskar Litvak, The Unresolved Ambiguity of Patent Claims • Prof. Dr.-Ing. Sigran Schindler, Quantification of Inventive Concepts 	<p>Patent—Subject-Matter</p> <ul style="list-style-type: none"> • Christopher Cotropia, USPTO's Patentable Subject-Matter Analysis After Alice • Shubha Ghosh, Demarcating Nature After Myriad • Dmitry Karshedt, The Completeness Requirement in Patent Law • Stefania Fusco, The Venetian Republic's Tailoring of Patent Protection to the Characteristics of the Invention 	<p>Patent—PTO</p> <ul style="list-style-type: none"> • Jay P. Kesau (& Hsian-shan Yang), A Comparative Empirical Analysis of Patent Prosecution in the USPTO and EPO • Michael Frakes (& Melissa Wasserman), Does the US Patent & Trademark Office Grant Too Many Patents? • Melissa Wasserman (& Michael Frakes), Is the Time Allocated to Review Patent Applications Inducing Examiners to Grant Invalid Patents? • Christopher Funk, Patent Prosecution Bars As a General Rule • Bryan Choi, Separating Patent-Able from Patent Act 	Paris Room
<p>Biotech</p> <ul style="list-style-type: none"> • Peter Lee, Centralization, Fragmentation and Replication in the Genomic Data Commons • Jacob S. Sherkow (& Henry T. Greeley), The History of Patenting Genetic Material • Saurabh Vishnubhakat (& Arti Rai & Bhaven Sampal), The Rise of Bioinformatics Examination at the Patent Office 	<p>Patent Presumptions / Procedure</p> <ul style="list-style-type: none"> • Jeremy Bock, An Error-Cost Assessment of the Presumption of Validity • Irina D. Manta (& Gregory Dolin), Taking Presumptions • Shubha Ghosh, What Makes a Case Exceptional? Fee Shifting as a Policy Lever • Greg Reilly, Patent Discovery: A Study in Litigation Reform 	<p>Patent Value / Remedies</p> <ul style="list-style-type: none"> • Jonathan H. Ashtor, Redefining "Valuable Patents" • David Abrams, Patent Value and Citations • Jonathan Masur, The Misuse of Prior Licenses in Setting Patent Damages • Chris Seaman, Property v. Liability Rules in Patent Litigation Post E-Bay 	<p>Patent Institutions / Policymaking</p> <ul style="list-style-type: none"> • Sarah Rajec, Indisputable IP: Case Studies • Michael Goodman, Empirical Assessment of Judges' Behavior • William Hubbard, Raising (or Razing?) the Patent Bar • Gregory Dolin, Dubious Patent Reform • Scott Kieff (& Troy Paredes), Variations in Internal Government Structures 	Berne Room
<p>Patent—SOs and Pledges</p> <ul style="list-style-type: none"> • Kristen Osenga, Everything I Needed to Learn About SSOs I Didn't Learn in Law School • Jurgita Randakaviciute, The Role of Standard Setting Organizations With Regard to Balancing Rights • Jorge Contreras, Patent Pledges 	<p>International / Cross-Border</p> <ul style="list-style-type: none"> • Franck Glogio, Exceeding the National Boundaries of IP Rights in Light of the WTO • Sapna Kumar, Policing Digital Trade • Elizabeth Winston, Patent Boundaries • David S. Levine, Temporal Transparency and the Process of Intellectual Property Lawmaking 	<p>IP and Development</p> <ul style="list-style-type: none"> • Alexandra George, Spiritual Property: Indigenous Knowledge Systems in an Intellectual Property Environment • Marigo Bagley, Of Indigenous Group "Straws" and Developed Country "Camels": Patents, Innovation, and the Disclosure of Origin requirement • Joy Y. Xiang, Addressing Climate Change: IP, No IP, or Another Possibility? 	<p>IP and the Internet</p> <ul style="list-style-type: none"> • Lucille M. Porte, Protecting Brand Image or Gaming the System? • Victoria Schwartz, Privacy Problems Start at the Top • Joseph Mrebe Tungaraza, Cybersquatting: the Relevance of the UDRP to Developing Countries • Christine Dawik, Access Granted: The Necessity of a Presumption of Public Access under the CFAA and Beyond 	Singapore Room
<p>Copyright</p> <ul style="list-style-type: none"> • Brad Greenberg, Black Box Copyright • Annemarie Bridy, Aereo: From Working Around Copyright to Thinking Inside the (Cable) Box • Aaron Perzanowski, Digital Property: The Uncertain Future of Ownership • Felix Wu, Secondary Copyright Remedies 	<p>Copyright</p> <ul style="list-style-type: none"> • Abraham Bell (& Gideon Parchomovsky), Copyright Trust • Rebecca Curtin, The Transactional Origins of Author's Copyright • Ben Depoorter (& Alain van Hiel), The Dynamics of Copyright Enforcement • Elizabeth Townsend Gard (& Geena Yu), Is Fair Use Coddable? 	<p>Trademark</p> <ul style="list-style-type: none"> • Jeremy Sheff, The Ragged Edge of the Lanham Act • Rebecca Tushnet, Registering Discontent • Megan Carpenter, "Behind the Music": Lanham Act 2(a) 	<p>Trademark</p> <ul style="list-style-type: none"> • Deborah Gerhardt (& Jon McClanahan), Colors • Jeanne Fromer (& Barton Beebe), The Closing of the Linguistic Frontier in Trademark Law • Lisa Ramsey, Trademarking Everything? • U. Shen Goh, Branding Linguistics: What do Coca-Cola and Chinese Bakeries Have in Common? • Abraham Bell (& Ted Sichelman & Gideon Parchomovsky), Trademarks as Club Goods 	Venice Room

Works-in-Progress Intellectual Property (WIPIP) 2015: Schedule of Presentations as of 2/3/2015

SATURDAY, February 7, 2015			
Session 7: 1:00—2:20	Session 6: 11:10—12:30	Session 5: 9:00—10:40	
<p>Patent—NPEs</p> <ul style="list-style-type: none"> David Schwartz (& Christopher Cotropia & Jay Kesari), Patent Assertion Entity (PAE) Lawsuits Nicole Shanahan, How Data Liberation Will Nix the Proverbial Patent Troll Paul R. Gugliuzza, Patent Trolls, Preemption, and Petitioning Immunity Roger Ford, the Uneasy Case for State Anti-Patent Laws 	<p>Patent—NPEs</p> <ul style="list-style-type: none"> Scott Kominers (& Lauren Cohen), Patent Troll Evidence from Targeted Firms Michael Burstein, Secondary Markets for Patents: An Evaluation Shawn Miller (& Ted Sichelman), Does Patent Litigation Diminish R&D? 	<p>Patent—Rationales</p> <ul style="list-style-type: none"> Ofar Tur-Sinai, Patents, Well-Being, and the State's Role in Directing Innovation Lucas Osborn (and Joshua M. Pearce), A New Patent System for a New Age of Innovation Srividya Raghavan, Reorienting Patents as the Protagonist for the Progress of Useful Arts Stephanie Bair, The Psychology of Innovation and Theories of Patent Protection 	<p>Berne Room</p>
<p>Patent Institutions / Policymaking</p> <ul style="list-style-type: none"> Carrolla Hrdy, Patent Nationally, Innovate Locally Cynthia Ho, Drug Rehab: How Cognitive Biases can Improve Drug Development Megan La Belle, Public Enforcement of Patent Law Josh Sarnoff (& Alan Marco), Is Refiling Practice Doing What It Ought To? I Can Name That Invention in X Words 	<p>Patent—Innovation Policy</p> <ul style="list-style-type: none"> Rachel Sachs, Innovation Law and Policy: Preserving the Future of Personalized Medicine Ted Sichelman (& Jonathan Barnett), Revisiting Labor Mobility in Innovation Markets Xuan-Thao Nguyen, Financing Innovation: Legal Development of IP as Collateral in Financing Sarah Burstein, The High Cost of Cheap Design Rights 	<p>Cross-IP</p> <ul style="list-style-type: none"> Clark D. Asay, Intellectual Property Law Hybridization Patrick Gould, IP Law and the Bundle of Torts Irina D. Manta (and Robert E. Wagner), IP Infringement as Vandalism 	<p>Singapore Room</p>
<p>Biotech</p> <ul style="list-style-type: none"> Kevin Collins, Justifying Patent Ineligibility: Regulation-Resistant Technologies Yaniv Heled, Five Years to the Biologics Price Competition and Innovation Act Nicholson Price (& Arti Rai), Biosimilars and Manufacturing Trade Secrets Liza Vertinsky, The State as Pharmaceutical Entrepreneur 	<p>Trademark</p> <ul style="list-style-type: none"> Leah Chan Grunwald, Contracting Trademark Fame William McGeeveran, What Campbell Can (and Can't) Teach Trademark Law Xiyin Tang, The Case for Genericide Defenses in Artistic Works 	<p>Copyright</p> <ul style="list-style-type: none"> James GrimmeImann, Copyright for Literate Robots Kate Klonick, Comparing Apples to Apples: Cognitive Science Concepts of Similarity Judgment Peter Yu, The Copy in Copyright Andres Sawicki, Law and Informal Rules of Creative Collaboration 	<p>Venice Room</p>
	<p>Trademark</p> <ul style="list-style-type: none"> Glynn Lunney, Inefficient Trademark Law Peter J. Karol, An Exclusive Right to Judicial Discretion: Learning from eBay's Muddled Extension to Trademark Law David Welkowitz, Willfulness 	<p>Copyright</p> <ul style="list-style-type: none"> Robert Braunes (& Dotan Ollar), The Electronic Copyright Office Catalog, 1978-Present Amanda Reid, Notice of Continuing Interest in a Copyrighted Work Chris Hubbles, No Country for Old Audio Zvi Rosen, Paradoxes and Lessons of State Law Protection for Sound Recordings 	



2015 WORKS-IN-PROGRESS IP COLLOQUIUM ABSTRACTS

Friday, February 6, 2015, Session 1: 9:00–10:40	2
Patent—PTO	2
Patent Institutions / Policymaking	6
IP and the Internet.....	8
Trademark.....	10
Friday, February 6, 2015, Session 2: 11:00–12:20	14
Patent—Subject Matter.....	14
Patent Value / Remedies	16
IP and Development.....	18
Trademark.....	19
Friday, February 6, 2015, Session 3: 2:00–3:20	23
Patent—Claims	23
Patent Presumptions / Procedure	25
International / Cross-Border	27
Copyright	29
Friday, February 6, 2015, Session 4: 3:40–5:00	31
Cross-IP	31
Biotech	35
Patent—SSOs and Pledges	37
Copyright	38
Saturday, February 7, 2015, Session 1: 9:00–10:40	42
Patent—NPEs	42
Patent—Rationales.....	43
Cross-IP	46
Copyright	47
Saturday, February 7, 2015, Session 2: 11:10–12:30	50
Patent—NPEs	50
Patent—Innovation Policy	51
Trademark.....	55
Copyright	57
Saturday, February 7, 2015, Session 3: 1:00–2:20	59
Patent Institutions / Policymaking	59
Biotech	62
Trademark.....	64
Copyright	66

Friday, February 6, 2015, Session 1: 9:00–10:40

Patent—PTO

- Jay P. Kesan (& Hsian-shan Yang), A Comparative Empirical Analysis of Patent Prosecution in the USPTO and EPO

The U.S. Patent and Trademark Office's 21st Century Strategic Plan presents a substantial reform of the current patent prosecution system. Two major concerns are efficiency and quality, and the USPTO is criticized in taking too long to process patent applications and having examiners who make too many errors in the prosecution process. Comparative studies have been undertaken to learn the differences in procedural efficiency and quality of patent examination among important international patent offices to derive lessons for examiners and prosecutors.

We analyze the duration and outcomes of patent examination at the United States Patent and Trademark Office (USPTO) and the European Patent Office (EPO) by utilizing a matched data set (same underlying invention and originating from the US and from Europe) covering a sample of 34,904 applications filed during 2002 and 2008, from which patents were issued by both the USPTO and the EPO. Focusing on pendency and the differences in issued claims, our empirical findings show that the duration of patent examination is related to the patentee's characteristics, patent value, and its country of priority. Our results suggest that a patent originating from the U.S. has significantly better procedural efficiency at both the USPTO and the EPO.

- Michael Frakes (& Melissa Wasserman), Does the US Patent & Trademark Office Grant Too Many Patents?

Many believe the root cause of the patent system's dysfunction is that the U.S. Patent & Trademark Office (PTO or Agency) is issuing too many invalid patents that unnecessarily drain consumer welfare. Concerns regarding the Agency's over-granting tendencies have recently spurred the Supreme Court to take a renewed interest in substantive patent law and have driven Congress to enact the first major patent reform act in over sixty years. Policymakers, however, have been modifying the system in an effort to increase patent quality in the dark. As there exists little to no compelling empirical evidence the PTO is actually over granting patents, lawmakers are left trying to fix the patent system without even understanding the root causes of the system's shortcomings.

This Article begins to rectify this deficiency, advancing the conversation along two dimensions. First, it provides a novel theoretical source for a granting bias on the part of the Agency, positing that the inability of the PTO to finally reject a patent application may create an incentive for the resource-constrained Agency to allow additional patents. Second, this Article attempts to explore, through a sophisticated natural-experiment framework, whether the Agency is in fact acting on this incentive and over granting patents. Our findings suggest that the PTO is biased towards allowing patents. Moreover, our results suggest the PTO is targeting its over-granting tendencies towards those patents it stands to benefit from the most—i.e., those patent applications directed towards

technologies that have historically had high-repeat filing rates such as information, computer, and health-related technologies. Our findings provide policymakers with much needed evidence that the PTO is indeed over granting patents. Our results also suggest that the literature has overlooked a substantial source of Agency bias and hence recent fixes to improve patent quality will not achieve their desired outcome of extinguishing the PTO's over-granting proclivities.

- Melissa Wasserman (& Michael Frakes), *Is the Time Allocated to Review Patent Applications Inducing Examiners to Grant Invalid Patents?*

We explore how examiner behavior is altered by the time allocated for reviewing patent applications. Insufficient examination time may crowd out examiner search and rejection efforts, leaving examiners more inclined to grant otherwise invalid applications. To test this prediction, we use application-level data to trace the behavior of individual examiners over the course of a series of promotions that carry with them reductions in examination-time allocations. We find evidence demonstrating that the promotions of interest are associated with reductions in examination scrutiny and increases in granting tendencies. Our findings imply that if all examiners were given the same time to review applications as is extended to those examiners with the most generous time allocations, the Patent Office would grant nearly 20 percent fewer patents. Moreover, we find evidence suggesting that those additional patents being issued on the margin as a result of such time pressures are of below-average levels of quality.

- Christopher Funk, *Patent Prosecution Bars As a General Rule*

In some patent cases, one party's outside attorneys may view the other's confidential technology while drafting or amending patent claims before the Patent Office in the same technological field. Without proper safeguards, these attorneys could abuse their protected access to that confidential technology by targeting and patenting it with the very claims they are drafting. Courts frequently protect against this danger by including a patent prosecution bar in a protective order. A patent prosecution bar prohibits those who access the opposing party's confidential technology from prosecuting patents that cover that same technology. But many courts refuse to enter patent prosecution bars, leaving litigants' confidential technology vulnerable to misuse.

While these bars are procedural and often handled by magistrate judges, disputes over them can erupt into satellite litigation. One party wants to forbid the other's attorneys and experts from targeting its confidential technology with new patent claims. The other party wants to ensure that the attorneys and experts most familiar with its technology and patents represent the party before the Patent Office. With weighty interests on both sides, district courts have taken conflicting approaches to prosecution bars. Before a recent decision of the U.S. Court of Appeals for the Federal Circuit, some district courts held that those who prosecuted patents were always making competitive decisions for their client and those decisions justified a prosecution bar. Other district courts held that prosecuting patents did not necessarily involve competitive decisions and that the need for a prosecution bar depended on the unique facts of each case.

To settle these differences, the Federal Circuit took up a petition for mandamus relief in In re Deutsche Bank Trust Company Americas, 605 F.3d 1373 (Fed. Cir. 2010). In that case, the Federal Circuit rejected the view that patent prosecution always involved competitive decisions and that prosecution bars should be routinely entered. Instead, the appellate court charged district courts to evaluate the activities of each attorney to decide if his or her record showed a history of making competitive decisions in prosecution. If the moving party demonstrated such a history, then the district court must balance the risk that the attorney would misuse the producing party's confidential information in prosecution against the receiving party's choice of counsel and that counsel's prior work for the client. Only after balancing may the district court enter a prosecution bar. And if the moving party could not show the other side's attorney had a history of competitive decisionmaking, the Federal Circuit opined that a prosecution bar was unnecessary.

Deutsche Bank resolved one split among the district courts, but it created and perpetuated others. District courts have split over what Deutsche Bank requires a party to show to justify a prosecution bar. Some courts have held that a party must show that each attorney's prosecution activities justify a bar. Others have held that the moving party must show only that the proposed prosecution bar is reasonable and that the opposing party must show that an individual attorney's activities justify an exemption to the bar. Both before and after Deutsche Bank, district courts have split over whether a prosecution bar should cover post-grant proceedings in the Patent Office that test the validity of a previously issued patent and permit amendments to that patent. In most cases, the post-grant proceeding concerns the asserted patent that the attorneys and experts are comparing to the other side's confidential technology. Some district courts say a prosecution bar should always cover post-grant proceedings, some say it should never cover them, and others say it should cover them unless the accused infringer initiated the proceeding. Deutsche Bank also created a loophole for litigants seeking to avoid prosecution bars by suggesting that bars should apply only to those attorneys that the moving party can show has made competitive decisions in prosecution. Accordingly, district courts often reject prosecution bars for attorneys or experts with little or no record of prosecuting patents, leaving them seemingly free to view the opposing party's confidential technology and advise others on how to draft a patent that targets that technology.

Deutsche Bank has proved unworkable. To resolve the district courts' splits and close the loophole, the Federal Circuit should abandon its balancing test and focus on counsel-by-counsel analysis. Instead, the court should adopt a general rule barring parties' representatives who access the opposing party's confidential technology from performing prosecution activities that trigger the memory of that technology and present an opportunity to patent the same. Those risky prosecution activities include determining the type and scope of patent protection worth pursuing, drafting or reviewing patent applications, and drafting or amending claims during an original prosecution or post-grant proceeding. The bar on these activities should extend to prosecuting patents that cover the same subject matter of the patents-in-suit and the confidential technological information produced in litigation.

District courts need not wait until the Federal Circuit resolves these splits or addresses the loophole in its jurisprudence. As the U.S. District Court for the Northern District of California has done, district courts can adopt a model protective order for patent cases that bars risky prosecution activities. By treating the model protective order as presumptively reasonable, district courts can effectively run an end-around Deutsche Bank to have a functional patent prosecution bar.

Litigants may decry that such a general rule or model prosecution bar violates their right to choice of counsel in a patent suit or before the Patent Office. That is incorrect. No party has a right to an attorney positioned to use the confidential information of the opposing party learned in one proceeding against that party in another. The law generally places strict limitations on attorneys positioned to misuse another party's confidential information. For example, courts typically forbid an attorney from representing a client when the matter positions that attorney to use confidential information from a former client in a way that harms the former client. That same principle should govern prosecution bars to ensure one litigant's representatives do not incorporate the other's confidential ideas and technology in a patent and use the same against the other party in a patent suit.

- Bryan Choi, Separating Patent-Able from Patent Act

The patentable subject matter doctrine is a cornerstone of patent law, allowing courts to disqualify patents as per se ineligible for protection. After decades of dormancy, the doctrine has been abruptly revived by the Supreme Court. Caught off guard, many in the patent community have criticized the judicial doctrine as dangerously unprincipled and have sought to confine it to the more familiar contours of the Patent Act. Indeed, "patentable subject matter" is commonly referred to as a § 101 issue, as though it were principally a matter of statutory construction.

Yet, the proper understanding of the doctrine is that it constitutes independent exercise of judicial power separate from the Patent Act. It is a constitutional doctrine—not a statutory one—that checks legislative and executive power from exceeding the authorization of the Progress Clause. As such, it is not a threshold "gatekeeper" inquiry, but rather a parallel inquiry that owes no fealty or deference to the Patent Act.

The underlying quarrel is not that the patentable subject matter doctrine leads to bad outcomes, but the fact that it disrupts settled assumptions regarding the supremacy of the Patent Act. Those who have come to rely on the Patent Act as the first and final arbiter of patent policy have good reason to find the patentable subject matter doctrine unsettling. It restores an uninvited variable to the system: independent judicial authority to police patent policy, not just rubberstamp it.

Patent Institutions / Policymaking

- Sarah Rajec, Indisputable IP: Case Studies

The adversarial process is used to adjudicate the content and boundaries of rights in US courts and some administrative agencies. In a typical patent case, for example, the court hears arguments from opposing sides from which it can base determinations of patent validity and scope, infringement, and remedies. In previous work, I described how in a tribunal of steadily growing importance for intellectual property disputes—the International Trade Commission (“ITC” or “Commission”)—certain cases proceed without the benefit of participation from “both” sides. The procedures governing investigations at the Commission may allow a patent holder to argue its preferred claim construction, unopposed, and obtain an in rem, general exclusion order. Subsequently, in challenges to Customs enforcement of Commission exclusion orders, an importer may make arguments about infringement and previously undecided claim construction issues, also unopposed. This phenomenon is troubling for its injustice, inefficiency, and potential for incorrect decisions that have effects beyond the relevant parties. The nature of intellectual property law is that incorrect decisions relating to claim scope may constrain future innovators and harm consumer access interests.

This article examines a number of International Trade Commission investigations that resulted in the in rem remedy of a general exclusion order to determine the strength of these critiques. In particular, this article focuses on investigations where all named respondents have been dismissed by the time the exclusion order issues, whether by settlement, consent order, or default. In addition, the article assesses the timing of the investigations and the depth of the claim construction orders and the need for further claim construction at Customs, and outcomes of parallel district court proceedings.

- Michael Goodman, Empirical Assessment of Judges’ Behavior

Patent law, perhaps the most “specialized” area of the law, is becoming more so in recent years. While it has long been the case that to become a patent lawyer and practice before the U.S. Patent and Trademark Office, one must both have a particular technical or scientific background as well as pass the rigorous patent bar, the courts wherein patents are enforced and challenged have traditionally been the purview of generalist lawyers and judges. But even outspoken critics of the specialization of courts have generally agreed that in “complex areas” such as patent law, it may be useful to have specialized courts. As a result, Congress responded to creating a specialized appellate court to consider patent appeals in 1982, the Federal Circuit, and began implementation, in 2011, of the Patent Pilot Program, the goal of which is to designate particular judges to deal with patent cases at the trial level. The assumption underlying this trend toward specialization of the courts is that judges with particular expertise will behave differently than their non-specialist colleagues. That assumption has not, however, been empirically validated. This project addresses the effect of the specialization of Federal Circuit judges by looking at the relationship between those judges’ education and experience and how they have decided cases over the last 30 years.

- William Hubbard, Raising (or Razing?) the Patent Bar

In discussions of the social utility of the patent system, the benefits of competition and the costs of limiting access have played increasingly important roles. Yet one aspect of the patent system has largely escaped this competition-related scrutiny: the patent bar. The paucity of scholarship in this area is surprising, given that nearly every patent is obtained with substantial input from a member of the patent bar and that membership in the patent bar is limited by a requirement that members possess formal education in certain technological fields. Moreover, the patent bar is unusual in the patent system in that membership does not require traditional legal training. Although patents convey substantial legal rights, a law degree is neither necessary nor sufficient to be eligible to join the patent bar. This Work-in-Progress analyzes from both theoretical and empirical perspectives whether these features of the patent bar effectively promote social welfare. In the theoretical portion, I will compare the stated justifications for the patent bar's eligibility requirements with the activities that members of the patent bar perform today, including (1) prosecuting design patents, (2) prosecuting business method and software patents, and (3) representing clients in administrative substitutes for litigation like inter partes review, post grant review, and covered business method reviews. For the empirical portion, I will compare the educational backgrounds of patent attorneys and agents with the technologies covered by the patents that they prosecute. After assembling an original dataset, I will assess the extent to which patent agents and patent attorneys are using their undergraduate training to prosecute patents. I will also evaluate the consequences of expanding patent-bar eligibility to allow lawyers without formal technical education to join the patent bar.

- Gregory Dolin, Dubious Patent Reform

The 2011 America Invents Act sought to drastically improve the American patent system by creating new review processes for already issued patents. These processes were meant to reduce patent litigation costs and clear the field of “dubious patents” all the while increasing certainty in the existence and scope of patent rights. Though this was not the first attempt to achieve these goals, Congress failed to heed the lessons of past reforms or fully take into account the costs associated with these new post-issuance review mechanisms. The result was a set of dubious reforms. This Article marshals empirical data and case-study based evidence to show that the newly created system is open to abuse, that such abuse in fact occurs, and that the costs that Congress ignored are indeed substantial.

- F. Scott Kieff (& Troy A. Paredes), Variations in Internal Government Structures

This paper will explore particular institutional and organizational differences among agencies, commissions, and courts that oversee the fields of intellectual property, antitrust, and finance. During the life of a patent, for example, a patent can pass from its birth at the PTO, to review at the PTO, DoJ, FTC, ITC, District Court, or Federal Circuit, and on to enforcement at the ITC, District Court, or Federal Circuit. Similarly, investor protection and capital formation in the U.S are shaped in various ways as SEC rules pass through the stages of drafting, promulgation, administration, and

enforcement. There is, of course, no single way to structure a government body; and different government bodies behave differently because of different institutional characteristics and decision-making dynamics. This paper will elucidate some key variations in the internal structures and dynamics that determine how decisions are made at agencies, commissions, and courts. In so doing, it will focus on responsiveness to various inputs, such as established views of economic science, the factual record, and governing law, as well as prevailing political and social currents. Our goal is to offer insight into how regulation and adjudication work in practice with policy implications for how to structure government bodies with rule-making and adjudicatory roles.

IP and the Internet

- Lucille M. Ponte, Protecting Brand Image or Gaming the System?

Protecting Brand Image or Gaming the System? Consumer “Gag” Contracts in an Age of Crowdsourced Ratings and Reviews. For decades, businesses sought to develop and control brand image through company-sponsored advertising and marketing campaigns. With the rise of social media, brand communications have become more interactive on Facebook, Twitter, Instagram, and a host of crowdsourced review sites, such as Yelp!, TripAdvisor and Angie’s List. This increased interactivity has helped some businesses to gain valuable insight into the consumer experience, to improve their brand image and to strengthen customer engagement and long-term relationships. Businesses soon learned that generating positive consumer ratings and reviews often translated into enhanced brand reputation and increased revenues. In light of these incentives, some businesses tried to burnish their brand image by paying for positive reviews while others sought to silence disgruntled customers through adhesive “gag” contracts. These gag contracts utilized reliance on dubious intellectual property claims, broad confidentiality clauses, excessive monetary penalties, and other financial threats in order to prevent unhappy consumers from posting negative reviews. Certain businesses justified these gag contracts as legitimate actions needed to protect their brand and goodwill in a social media environment fraught with fake negative reviews from unscrupulous competitors and libelous consumers and flawed filtering and rating systems. This paper will examine the rise of consumer gag contracts and consider the legality of such agreements in light of basic principles of contract formation, unconscionability and public policy. This article will conclude with regulatory and best practices proposals that seek to balance customer speech interests with legitimate branding concerns.

- Victoria Schwartz, Privacy Problems Start at the Top

With the rise of big data and privacy merchants, numerous corporations today are in the actual business of privacy. Even corporations that are not directly in the privacy business, however, still have significant power to make important decisions affecting the privacy of their employees and consumers in a world of rapid technological advances.

There is a widespread belief among scholars and commentators that corporations do not adequately protect privacy. For many corporations, privacy concerns were not even on the radar as recently as a decade ago. To date, scholars have largely focused on a

consumer-driven market failure to explain this phenomenon. The conventional explanation is that publicly traded companies respond to public demand, and as long as consumers ignored privacy policies and otherwise failed to price their privacy preferences, corporations responded accordingly. Scholars have offered numerous private sector and regulatory solutions to remedy this market failure.

This paper contributes to the existing literature by adding to the existing consumer-driven market failure explanation an additional corporation-side market distortion explanation for why corporations do not adequately protect privacy. Extensive corporate disclosure requirements, including the possibility of disclosure of executives' personal information combined with increased media interest in the personal lives of at least some corporate executives, likely skew the selection of executives of public companies towards individuals who do not highly value privacy. This sorting effect both directly impacts obvious privacy policy decisions with regard to consumers and employees, but also may cause the corporation to fail to recognize the presence of privacy concerns that are not squarely presented.

Recognition of this privacy sorting market distortion as a piece of the picture allows a shift away from a simplistic view of the corporate privacy problem as a consumer-driven market failure to a more complex account that targets and accounts for the specific market failures and distortions. The paper concludes by identifying a few possibilities that can help offset the market distortion including allowing corporate executives to negotiate their own disclosure policies, as well as including chief privacy officers as a matter of good corporate governance in order to have someone within the corporate suite whose job it is to think about and raise the privacy implications of various policies and decisions.

- Joseph Mtebe Tungaraza, *Cybersquatting: the Relevance of the UDRP to Developing Countries*

Many states have enacted specific legislation regulating the use of domains and Cyber Squatting. For example, the United States enacted the Anti Cyber Squatting Consumer Protection Act, 1999. Many states, like Tanzania, do not have similar legislations in place too. Unlike their developed countries counterparts, domain names has not been a legal minefield attracting many suits or causes of action in developing countries such as Tanzania.

- Christine Davik, *Access Granted: The Necessity of a Presumption of Public Access under the CFAA and Beyond*

Recently, there has been a significant increase in attempts to use the Computer Fraud and Abuse Act ("CFAA") to improperly control legitimate competition and innovation. The CFAA has once again come under intense scrutiny at both the judicial and legislative level due to a number of factors. Among them, is publicity surrounding the website Craigslist and its controversial decision to file numerous lawsuits against entities that accessed and utilized the non-copyrightable factual data contained within ads posted by users to the site.

One of the central issues in these types of cases has been whether the CFAA should apply when the owner of a publicly accessible website tries to restrict access to particular entities. This often turns in part on whether breach of the terms of use (“TOU”) on a publicly accessible website should even be the basis for a CFAA claim. TOUs are ubiquitous on websites today and come in many different forms such as browsewrap and clickwrap licenses. Particularly in light of the fact that the CFAA provides for not only civil liability but criminal liability as well, the unrestricted ability of a website owner to unilaterally dictate the terms regarding access and use of material on a publicly accessible website is quite concerning. This is an area in which there is a split among federal circuits at the moment. While the 9th Circuit recently ruled that violation of a TOU cannot constitute a violation of the CFAA, it is clearly the outlier regarding this matter as most other circuits, including the 5th, 7th, and 11th have taken the opposite position.

Nonetheless, even if the CFAA were amended to provide that a TOU cannot be the basis for a claim under the CFAA itself, the issue of contract liability separate and apart from the CFAA still potentially remains. This is an area of contract law that is extremely problematic, as with very few exceptions, courts have given the owners of publicly available websites complete freedom to decide who or what may view and utilize the information contained on the site, as well as how such restrictions are communicated to the user. This is particularly concerning when the terms are clearly drafted in such a way to prohibit legitimate competition and accordingly could negatively impact innovation. I plan on exploring how the criteria for evaluating the enforceability of restrictive covenants in the employment context might provide a more appropriate and nuanced framework to analyze whether a TOU should likewise be enforced as drafted.

Trademark

- Deborah Gerhardt (& Jon McClanahan), Colors

*This Article empirically examines the use of colors in trademark applications. Working from a wealth of data the USPTO released in 2012, we examine the twenty-five year period of 1987-2012 to determine how marks that claimed color have fared in various stages of the trademark application process. Using publication and registration rates as our measures for success in the trademark prosecution process, we first look at success rates of design marks compared to those that do not claim a design element. Next, we identify the number of marks and the percentage that succeeded if they claimed color as an element of design. In 1995, the Supreme Court decided *Qualitex v. Jacobson Products*, and held that color alone may be protected as a trademark. To better understand the impact of this decision, we examine how many marks are based on color alone, and their success rates before the USPTO. For each category of applications—design marks, color as an element of design, and color only marks—we identify the primary barriers to publication and registration and the extent to which they impact success rates. Finally, using abandonment data, we depict the longevity of marks in each of these categories. Next, we consider the characteristics of the trademark applications in which colors are claimed. Specifically, we identify the goods or services associated with such marks, the types of entities who register such marks, and the degree to which*

competitors are involved in the registration of and opposition to such marks. We also evaluate the extent to which the concerns in *Qualitex* over “shade confusion” and “color depletion” have been realized and how often color alone has been claimed and registered as a trademark before the USPTO.

- Jeanne Fromer (& Barton Beebe), *The Closing of the Linguistic Frontier in Trademark Law*

American trademark law has long operated on the assumption that there exists an inexhaustible supply of possible trademarks. With respect to word marks in particular, the law has assumed that there will always be a reasonable supply of preexisting words ripe for exploitation as trademarks and that in any case trademark adopters can simply coin new words, the supply of which is assumed to be effectively infinite, to serve as trademarks. In this paper, we present empirical evidence that fundamentally challenges these assumptions. We use the U.S. PTO’s recently released Trademark Case Files Dataset, consisting of information on 7.4 million trademark applications at the PTO between 1870 and 2014, to show the surprisingly high proportion of English words already registered as trademarks in the U.S. and the limited availability of possible coinages not already identical or similar to registered word marks. The paper explores the implications for trademark law and policy of this closing of the frontier of trademarks.

- Lisa Ramsey, *Trademarking Everything? Why Brands Should Care About Limits on Trademark Rights*

For many businesses today, selecting an effective slogan, color, or design to use in connection with an advertisement, product packaging, or the firm’s website or services can be challenging because almost everything can be (and might already be) protected as a trademark. For example, banks and other companies in the financial services industry should be aware that, according to the “The Financial Brand” website, there are over a thousand slogans and taglines that are being used by banks and credit unions. In addition, Wells Fargo now claims trademark rights in the phrase “Envelope-Free” for its ATMs, as indicated by its use of SM in “Envelope-Free SM ATMs” on its website. Descriptive words and other informational phrases can be protected as a trademark if they become distinctive, meaning that consumers now associate the language with a single company that has used the mark in connection with the advertising and sale of its goods or services. Single colors are also protected by trademark law if they have acquired distinctiveness. For example, a German bank has a trademark registration for a particular shade of the color red (fire-engine red) used in connection with banking services in Germany, and has used its trademark rights to prevent other banks that use this color in their logos or advertising materials from doing business in Germany. A firm’s trademark attorneys should confirm which slogans and colors are “off limits” for use in this industry, and also whether a competitor claims trademark rights in certain website designs or the design or layout of its brick-and-mortar office. Apple obtained a trademark registration for its retail store design, so banks could too if the design is distinctive.

*Many leading brands instinctively favor the expansion of trademark rights. They are often the owners of several registered trademarks and may claim exclusive rights to a variety of common law trademarks, including descriptive words, colors, product configurations, scents, sounds, tastes, textures, and movements used in connection with the advertising and sale of their goods or services. It is not surprising that brands are seeking protection of such non-traditional trademarks in the United States, as the U.S. Supreme Court held in *Qualitex* that the language in the federal trademark statute could allow protection of “almost anything at all that is capable of carrying meaning.” While there are some limits on what can be protected as a trademark, including the distinctiveness requirement and categorical exclusions of some types of subject matter (such as national flags), trademark offices and courts around the world are increasingly protecting exclusive rights in informational language, colors, and product attributes in a manner that may harm fair competition and the free flow of expression.*

The goal of this project is to convince trademark owners, including the leading brands, that limits on trademark rights will benefit them, and not just benefit start-up competitors, critics, and commentators. After discussing various examples of how the expansion of trademark law has caused problems for everyone ranging from large corporations to small businesses, I will set forth the advantages and disadvantages of various proposals for the reform of trademark laws from the perspective of established trademark owners. Then I will discuss several ideas for encouraging brands to care more about limits on trademark rights, and the best approach for achieving reforms of trademark law that would likely be supported by trademark owners. It will be impossible to implement pro-competitive and speech-protective reforms of domestic or international trademark laws without the support of companies that currently own registered and common law trademarks.

- U. Shen Goh, *Branding Linguistics: What do Coca-Cola and Chinese Bakeries Have in Common?*

The emergence of Chinese brands has become a global phenomenon. Not only are Western businesses merging with and acquiring Chinese businesses, but Western trademarks are engaging in brand extension or cross-branding with Chinese mark owners. In doing so, unexpected language issues are being encountered that create market confusion, cause inefficiencies, and increase costs.

The U.S. addressed these issues with the doctrine of foreign equivalents. Canada has no such doctrine and continues to struggle with these issues. It decided in 1992 that two competing bakeries could use the same Chinese language marks, and there would no confusion since the average Canadian had no linguistic knowledge of Chinese. That same year, The Coca-Cola Company abandoned all its Canadian registrations for Chinese language marks. Then Canada decided in 2001 that the two competing bakeries could not use the same Chinese language marks, and that there would be confusion since it took judicial notice of a Chinese linguistic population in Canada. What led to this opposite conclusion and what will it mean for The Coca-Cola Company?

This paper proposes as a solution to this conflict among Chinese language marks a model that more realistically assesses the linguistic knowledge of the presumed trademark consumer. Using Chinese language marks as a test case, it also develops a method for filing and searching such marks that may suggest similar methods for avoiding conflicts involving foreign language marks in general.

- Abraham Bell (& Ted Sichelman & Gideon Parchomovsky), Trademarks as Club Goods

The most commonly accepted justification for trademarks is that they lower costs to consumers in identifying the source of a good, thereby allowing consumers to more efficiently select those goods of with desired quality and characteristics. For instance, if all bar soap were wrapped in a plain, white wrapper and labeled "soap," it would be impossible for consumers to distinguish quality and other characteristics (e.g., foaminess) among bars without the seller of the good providing information about various batches of soap.

In our article, we offer an entirely different justification for trademarks, namely, that they enable producers to create "club goods." Public goods are goods that are non-excludable and non-rivalrous in consumption. Traditional economic theory holds that public goods can never profitably be produced by a private producer, and that the state must therefore supply public goods. A club good is a public good, but without the pure non-excludability. A club good can be freely consumed by those in the club, but those outside the club are excluded. Clubs will readily produce goods for their members, because they can earn enough in club membership fees to justify the cost of production. Likewise, producers will readily produce goods for clubs because the clubs can pay for the goods.

We show that one of the greatest values of trademark protection is trademark's use in defining the boundaries of a club, and excluding consumption of a good outside the club. The club good value of trademark is entirely distinct from its value in reducing search costs, and it explains several features of trademark law that search cost explanations cannot, such as the distinctive protection against dilution offered to famous marks.

Patent—Subject Matter

- Christopher Cotropia, USPTO’s Patentable Subject-Matter Analysis After Alice

Since the Supreme Court's decision in Alice, more patents are being invalidated under § 101, both in district courts and the USPTO. And these decisions are citing and quoting Alice in the process. However, simple observation of timing (post-Alice) and citation (to Alice) in these decisions is not enough to fully comprehend what Alice has done. That is, has Alice fundamentally changed the legal analysis regarding § 101 or did Alice merely prompt a shift in attitude? In an attempt to more precisely measure what has changed post-Alice, this Article will examine the USPTO's patentable subject matter analysis in Covered Business Method (“CBM”) petitions and proceedings. CBM review decisions provide a fertile ground for such an examination given the subject matter of the patents at issue and the availability of § 101 to requesters. Accordingly, content analysis will be performed on all CBM decisions, both prior to and after Alice, to quantify any change in the USPTO's doctrinal approach to § 101 questions. Such analysis should shed light on what Alice actually changed and the specific direction in which § 101 is headed.

- Shubha Ghosh, Demarcating Nature After Myriad

The United States Supreme Court in its Myriad decision affirmed the existence of a borderline between unpatentable natural phenomena and potentially patentable inventions. However, the Court cribbed a few pages from standard biotechnology to lay out the contours of this boundary without appeal to patent law or policy. As a result, courts have read the exclusion from patenting quite broadly in subsequent cases, such as in Ariosa involving fetal DNA and in the recent Roslin Institute decision involving clones. While some may welcome this broad limitation on patenting life forms, the lack of a clear policy is worrisome for two reasons. The first has to do with arguments that US courts have undermined their credibility by assuming broad discretion, at the expense of expert agencies, in reviewing questions of science and patent law. Labels like anti-patent subvert any claim to principle. This first problem reverberates with a second class of problems: collateral limitations on patenting in the area of infringement and in competition policy. In the same term that the Court limited patents on naturally occurring DNA, it also held in Bowman v. Monsanto that planting a patented seed constitutes patent infringement. This decision ignored the natural processes of reproduction and regeneration and subsumed them under the patent claims. Furthermore, the Court has moved towards finding competition limitations on the scope of patents in its Actavis decision, published a few weeks before its Myriad decision. While the Court attempted to articulate the policies of competition law that limit patents in the Actavis case, the Court has not recognized the competition issues that arise in the biological sciences when the nature meets the marketplace. This paper revisits the Myriad decision and seeks to do what the Court failed to do, namely articulate the policy basis for separating natural phenomena from patentable subject matter and identify how these policy limitations apply to issues of infringement and competition policy.

- Dmitry Karshedt, The Completeness Requirement in Patent Law

This Article argues that courts have created a de facto extra- statutory condition of patentability, herein termed the “completeness” requirement, which bars patents on certain inventions whose chief value lies in their function as inputs into downstream research. The Article contends that the notion of completeness explains doctrinal innovations that are difficult to rationalize any other way. The Article also argues that, although it reflects the important policy of limiting unduly preemptive patent claims on foundational, building-block inventions, the completeness requirement in its current form nonetheless fails to implement this policy in a way that is coherent and consistent with patent law’s utilitarian goals. In addition, courts’ attempts to develop the completeness requirement based on existing statutory provisions have resulted in controversial interpretations of the Patent Act, creating legitimacy costs.

The Article argues that these problems are best addressed by explicitly recognizing completeness as a separate requirement of patentability and modifying the doctrinal tools that are used to enforce it. In order to determine whether a patent claim passes this requirement, a new test is proposed that focuses on the generality and unpredictability of a claimed invention’s applications. The Article further contends that an amendment to the Patent Act codifying the requirement of completeness is probably the most effective way to implement the proposal. In addition, the Article explores the possibility of awarding a limited patent right to claims that satisfy existing requirements of patentability, but fail completeness. The right, herein termed “Research Patent,” would provide the intellectual property incentives that are likely needed to develop and commercialize foundational inventions, but help decrease the potential for stifling downstream innovation caused by granting full patent protection to such inventions.

- Stefania Fusco, The Venetian Republic’s Tailoring of Patent Protection to the Characteristics of the Invention

In 1474, the Venetian Republic enacted what is widely recognized to be the first Patent Act in the world. Legal scholars have generally assumed that after this time, patents were granted in Venice based on this Act, or in other words, based on Venice’s statutory patent system. This is because they relied on the writings of historians and political scientists who did not have legal training, and who, consequently, missed many of the legal nuances of the Venetian patent system. In fact, up to now, only two other legal scholars have examined the original Venetian patents. In this article I use original documents from the Venetian State Archives to present a detailed account of how the Venetian Republic used its customary patent system to tailor protection to the characteristics of the invention. The Venetian patent system appears to have produced a number of positive outcomes. As a result of its patent system, Venice transformed from a nation of sailors, to a nation of artisans and engineers, becoming the center of technological development in 16th century Europe. Thus, the Venetian customary patent system is an important example of how tailored patent protection can be provided. The accurate description of this system is crucial to further understanding the specific steps that we would need to take to achieve this goal today.

Patent Value / Remedies

- Jonathan H. Ashtor, Redefining “Valuable Patents”

This study analyzes the factors that make patents valuable, and it aims to redefine the term “valuable patents” as it has been widely used in prior theory and practice. Leading scholarship predominantly relies on proxies for value (e.g., whether a patent has been asserted or maintained) to designate which patents are “valuable” and which are not. Here we study value more precisely, identifying the specific characteristics that are associated with higher or lower enforcement values and the quantitative relationship each factor has with the amount of such value. In so doing, we identify previously unobserved categories of patent enforcement value and shed new light on the principal defining characteristics of “valuable patents.”

Specifically, we mine a vast array of data relating to each patent that has been held valid and infringed in each U.S. District Court case from 2006 to 2011. The dataset comprises nearly 400 patents from over 200 cases awarding infringement damages during this six-year timeframe. For each patent, over 70 unique data points are coded, including variables regarding prosecution history, inventor expertise, specification and claim structure, patent family tree, forward citations and recorded transfers and liens, as well as characteristics of the litigants and claims in each case. Using this extensive dataset, we conduct correlation and regression analyses to identify the key factors that are associated with valuable patents.

Based on this analysis, we redefine “valuable patents” as, in order of importance: (1) practiced patents, (2) upstream patents, and (3) to a somewhat lesser extent, forward-cited patents. We further articulate distinctions between enforcement value and other types of patent value, such as licensing or transaction value. These findings thus provide new insights into patent value and inform patent valuation metrics, and they lay groundwork for future research.

- David Abrams, Patent Value and Citations

Prior work suggests that more valuable patents are cited more and this view has become standard in the empirical innovation literature. Using an NPE-derived dataset with patent-specific revenues we find that the relationship of citations to value in fact forms an inverted-U, with fewer citations at the high end of value than in the middle. Since the value of patents is concentrated in those at the high end, this is a challenge to both the empirical literature and the intuition behind it. We attempt to explain this relationship with a simple model of innovation, allowing for both productive and strategic patents. We find evidence of greater use of strategic patents where it would be most expected: among corporations, in fields of rapid development, in more recent patents and where divisional and continuation applications are employed. These findings have important implications for our basic understanding of growth, innovation, and intellectual property policy.

- Jonathan Masur, *The Misuse of Prior Licenses in Setting Patent Damages*

Courts that must determine reasonable royalty patent damages—when a patent plaintiff cannot or will not prove lost profits—have largely floundered due to the absence of reliable information and the hypothetical nature of the questions the court must answer. Amidst these difficulties, courts have often turned to existing licenses, either granted by the plaintiff or paid for by the defendant, as evidence of the proper measure of damages. Reliance on existing licenses has become even more prominent in recent years. But the use of these licenses carries with it several different and potentially insuperable problems. It introduces a circularity into damage calculations: licenses are based upon expected litigation outcomes, and litigation outcomes are based upon licenses. It relies upon unknowable private information held only by the parties to the original license: what was the likelihood that the patent would be held to be valid and infringed? And it encourages strategic behavior involving third parties that can distort licensing prices: patent holders have incentives to artificially inflate licensing prices in order to increase their returns to litigation. There is real doubt as to whether market licenses can ever be useful evidence of reasonable royalty damages.

- Chris Seaman, *Property v. Liability Rules in Patent Litigation Post E-Bay*

*In this project, I seek to empirically assess the impact of the Supreme Court’s decision in *eBay, Inc. v. MercExchange, LLC*, 547 U.S. 388 (2006), on grants of permanent injunctions or, in the alternative, ongoing royalty awards, in patent litigation.*

*Prior to *eBay*, the Federal Circuit established a “general rule” granting injunctive relief after entry of a final judgment that the asserted patent was valid and infringed. *Id.* at 391. Overcoming this presumption required a significant showing of public harm that outweighed the patentee’s irreparable harm. In practice, however, this rarely occurred, and district courts routinely granted injunctions after a finding of infringement.*

*In *eBay*, the Supreme Court unanimously rejected the Federal Circuit’s “general rule” in favor of injunctive relief, instead holding that trial courts must apply “traditional equitable principles” in the form of a four-factor test. *Id.* at 391-94. However, in their concurring opinions, Chief Justice Roberts and Justice Kennedy offered seemingly divergent assessments regarding *eBay*’s likely impact in patent litigation. Chief Justice Roberts suggested that trial courts would continue to grant injunctive relief after a finding of infringement in “the vast majority of patent cases,” *id.* at 395, whereas Justice Kennedy asserted that injunctive relief may be inappropriate in situations that differed from traditional patent litigation, such as suits by non-practicing entities (NPEs) and cases involving business method patents. *Id.* at 396.*

*To test these predictions, as well as several other hypotheses about the nature and frequency of injunctive relief post-*eBay*, I am empirically studying all district court decisions where the patentee requested a permanent injunction following a finding of infringement (excluding uncontested injunctions) from the date of the *eBay**

IP and Development

- Alexandra George, *Spiritual Property: Indigenous Knowledge Systems in an Intellectual Property Environment*

For some years, the World Intellectual Property Organization's ('WIPO') Intergovernmental Committee on Genetic Resources, Traditional Knowledge and Folklore ('IGC') has been working towards concluding a treaty to protect the traditional knowledge and cultural heritage of indigenous peoples. Negotiations have been somewhat fraught as participants seek to identify the objects of regulation and design of a system by which such regulation could occur.

Informed by literature examining the construction of Western intellectual property law and social systems, and using several examples as case studies, this paper explores the treaty-making process from a theoretical perspective.

Considering contentious issues from a 'systems theory' perspective, the paper draws a distinction between the nature and role of 'intellectual property' within a Western legal framework versus the nature and role of 'traditional knowledge' within indigenous knowledge systems. This analysis offers insights that may be useful when trying to design frameworks for the recognition and protection of indigenous knowledge systems/traditional knowledge alongside Western intellectual property laws.

- Margo Bagley, *Of Indigenous Group "Straws" and Developed Country "Camels": Patents, Innovation, and the Disclosure of Origin requirement*

This Essay explores the assertion, by many developed country representatives, that the adoption of a patent applicant genetic resource disclosure of origin (DOO) requirement, such as the one being considered in the World Intellectual Property Organization (WIPO) Intergovernmental Committee (IGC) negotiations, will impose untenable, innovation-detering burdens and legal uncertainty on the global patent system. It also considers such a disclosure requirement in comparison to other burdens/uncertainties in the U.S. patent system, and in the context of EU ratification of the Nagoya Protocol, and concludes that, far from being the straw that may break the camel's back, a DOO requirement may enhance innovation in the U.S., Europe, and beyond.

- Joy Y. Xiang, *Addressing Climate Change: IP, No IP, or Another Possibility?*

Climate change is an essential issue that the global community is addressing together. Scientific research has established climate change largely is induced by excessive greenhouse gases emitted by human activities—e.g., those occurred during the industry development era. Clean technologies (i.e., technologies necessary for adapting to and mitigating climate change) play a key role in the solution for climate change. The global development and diffusion of clean technologies is critically important, as the impact of greenhouse gas emissions hence climate change has no geographic limitation.

Yet, a gridlock has been persisting in the recent rounds of climate change negotiations at the United Nations, caused by diverging views regarding the role of intellectual property rights (“IPRs”) in the development and diffusion of clean technologies. The North (i.e., the developed nations) insists on strong IP protection for clean technologies, while the South (i.e., the developing nations), charging IPR to be the major barrier for international transfer of clean technologies, asks for no or weakened IPRs for clean technologies. Hence, this paper takes on the exploration of two questions: 1) Why is international transfer of clean technologies not working well and is IPR the major barrier; and 2) how to facilitate the needed global development and diffusion of clean technologies.

Analyzing data such as three global surveys on patent ownerships and international transfer of key clean technologies, as well as reviewing nations’ own assessments on what constitute major barriers for development and deployment of clean technologies, this paper tries to understand the reasons behind the insufficient international transfer of clean technologies. Based on such an understanding, this paper proceeds to explore an alternative model for addressing climate change via the development and diffusion of clean technologies. This model emphasizes innovation, technology collaboration, and international aid, rather than international transfer of clean technologies.

This model suggests that, instead of focusing on transfer of clean technologies from the North to the South, we focus on: 1) both the North and the South stimulating domestic innovations on clean technologies—this includes both the North and the South customizing its IP systems and leveraging diverse innovation tools to facilitate development in clean technologies; 2) the North and the South constructing technology collaboration platforms that would benefit both parties; and 3) the North continuing the actualization of its commitment in providing financial and technical aids to the South, while the South developing sustainable national capacities that would attract international transfer of clean technologies.

Trademark

- Jeremy Sheff, *The Ragged Edge of the Lanham Act*

Recent cases are exposing an unstable boundary between the administrative and judicial provisions of the Lanham Act. Fault lines along this boundary include the relationship between the criteria for registrability under Section 2 and the criteria for enforceability under Section 43(a), standing and justiciability issues arising under the peculiar judicial review provisions of Section 21, and the applicability of principles of deference and preclusion in disputes that spawn successive proceedings before both the TTAB and the courts. This paper explores these areas of doctrinal instability and argues that they arise out of both poor legislative draftsmanship and some fundamental and unresolved questions about the trademark system. Specifically, these doctrinal puzzles reflect ambivalence as to whether registration is substantive or procedural, uncertainty over the role and prerogatives of the PTO as a matter of administrative law, and the absence of a coherent normative basis for registration in particular or unfair competition law in general.

- Rebecca Tushnet, Registering Discontent

Trademark scholars widely agree that our current system for evaluating what rights a trademark owner should have over others' uses of their (or similar) marks is badly broken. Trademark practitioners, meanwhile, while regularly quite approving of broad interpretations of trademark law, widely recognize that our trademark registration system has significant problems. Among other things, a pilot study recently showed that registrants overclaimed the goods and services on which they used marks in nearly two-thirds of registrations: they told the U.S. Patent and Trademark Office (PTO) that they were using marks on goods when they weren't. In thirteen percent of the examined cases they weren't using the marks at all. "Intent to use" applications also generate significant numbers of paper rights with no ultimate legal existence. This "deadwood" on the register prevents legitimate users from knowing what they can and can't do; improperly granted registrations are harmful even from the perspective of the greatest trademark expansionists. What we haven't done is try to unite concerns over infringement doctrine with concerns over registration and explain their relationship to each other.

Consider: If the mark "Redskins" for a football team is disparaging and its trademark registration therefore invalid, can trademark law nonetheless protect the team against unauthorized uses of the term? This question became more than theoretical when the Trademark Trial and Appeal Board recently upheld the invalidation of the Redskins registrations, a ruling now on appeal and likely headed to the Supreme Court. Or suppose the U.S. Patent and Trademark Office (PTO) determines that, in the abstract, an applied-for trademark is likely to cause confusion with another previously registered mark. If the applicant decides to use the mark anyway, without a registration, should the PTO's determination bind a federal court asked to determine whether the new mark, as actually used, causes confusion with that previously registered mark? The Supreme Court is poised to decide this issue in the coming Term.

These questions, and a number of others, highlight the need for renewed attention to trademark registration as such. More than seventy years after the modern federal trademark statute was enacted, we have lost sight of the initial concept of registration—a benefit accorded to a specific subclass of protectable marks—and have not replaced it with anything coherent. The result is a system that is half reliant on legal fictions and half reliant on attempts to engage in empirical fact-finding, and which dominates depends on the day and the court. There are three interrelated tensions in current law: the goals of trademark in protecting consumers from confusion and helping producers structure their behavior; the difference between the standard for registrability and the standard for finding likely confusion in the marketplace; and the difference between the treatment of registered and unregistered marks. None of these tensions can be entirely resolved to favor only one side. But by understanding their relationship, we may be able to improve the system.

- Megan Carpenter, “Behind the Music”: Lanham Act 2(a)

Lanham Act 2(a) bars trademark registration for certain marks, including marks that are scandalous and immoral. This paper provides an empirical look at trademark registration rejections under Lanham Act 2(a), in an effort to understand the context of these rejections. I consider such questions as: What evidence is being used by examiners as the basis for these rejections? How frequent are Office Action Responses filed by applicants? Does the rejection impact use of the mark? And, to what extent is market context a consideration? The paper is a follow-up to a symposium piece I authored for the Louisville Law Review. It concludes that examining attorneys are not applying the standard in an effective way, and argues that a consideration of contextual factors, like those considered in the likelihood of confusion analysis, would result in a more effective application of 2(a).

- Cathay Y. N. Smith, The Life and Death of a Scandalous Mark

This project will take an empirical approach to analyze U.S. trademark law’s prohibition of the registration of “immoral” or “scandalous” trademarks, in order to determine whether this prohibition has the practical effect of limiting actual use of immoral or scandalous marks in commerce and chilling scandalous or immoral commercial speech.

A trademark application in the U.S. Patent and Trademark Office may be denied on the basis that the mark consists of or comprises “immoral” or “scandalous” matter. Specifically, Section 2(a) of U.S. Trademark Law, 15 U.S.C. 1052(a) states that “[n]o trademark ... shall be refused registration on the principal register on account of its nature unless it—(a) Consists of or comprises immoral ... or scandalous matter...” (hereinafter, the “Scandalous Provision”). The Scandalous Provision is an absolute bar to registration of “immoral” or “scandalous” marks. The USPTO has used the Scandalous Provision to deny registration of trademarks, and interested third-parties have used the Scandalous Provision as a basis to oppose trademark applications and seek to cancel existing trademark registrations in the USPTO.

There are a number of typical criticisms of the Scandalous Provision. The Scandalous Provision may abridge a person’s First Amendment interest in freedom of speech. This First Amendment argument, however, was considered and rejected by the Federal Circuit in two separate cases on the ground that the USPTO’s failure to register a trademark does not prevent the applicant’s right to actually use the trademark in commerce. The Scandalous Provision has also been criticized because it may fail to eliminate immoral/scandalous commercial speech, because applicants are still permitted to use a scandalous mark even after denial, and—because of the limit in protection—the Scandalous Provision may actually have the opposite effect of allowing more people or companies to use same or similar scandalous trademarks. Furthermore, based on a marketplace theory, society should be free to decide, with their wallets, whether a company’s trademark is truly offensive. If consumers find a mark too offensive or scandalous, they will avoid the company or its products, and the company will be forced to change its scandalous trademark or fail.

The purpose of this project is to use an empirical approach to collect and interpret data relating to the current statuses of trademarks that were denied registration under the Scandalous Provision between December 5, 1996 and August 1, 2014. The trademarks examined would be limited to those rejected by the USPTO under the Scandalous Provision, and subsequently had such rejection affirmed by the TTAB and/or the Federal Circuit. The questions that this project will attempt to answer is whether denial of a trademark registration under the Scandalous Provision in fact leads a trademark applicant to abandon use of its immoral or scandalous mark, or whether trademark applicants continue to use and succeed in using immoral or scandalous marks in commerce despite the USPTO's and TTAB/Federal Circuit's rejections. This project is significant as it will attempt to use actual data to determine whether the Scandalous Provision is having the USPTO/government's intended effect of limiting scandalous/immoral marks in commerce. It will also utilize factual data to lend support to or disavow some of the typical arguments and theories articulated in support of or against the Scandalous Provision.

Patent—Claims

- Adam Mossoff, *O’Reilly v. Morse*

O’Reilly v. Morse (1854) is a famous patent case. It is relied on by Justices and judges, discussed by scholars, and taught to students. Everyone agrees it was correctly decided: Chief Justice Roger Taney’s majority opinion stopped Samuel Morse’s attempt to control all telecommunication technologies with a patent that went far beyond his invented telegraph and encompassed modern email, fax machines and text messages. This conventional wisdom, however, is profoundly mistaken. It fails to account for the historical context in which Morse invented, patented, commercialized and ultimately was swept up in massive litigation over his innovative telegraph.

This paper reinserts the full historical context back into our understanding of the Morse decision. It details the invention and innovative commercial development of the telegraph, and it reveals that Chief Justice Taney’s opinion was not a sterling exemplar of patent law. Similar to his decisions in constitutional law and in other patent cases, Chief Justice Taney ignored established patent doctrines and instead decided the case on the basis of his own political biases. As a fervent Jacksonian Democrat, Chief Justice Taney viewed patents as state-granted monopolies, and not as property rights in technological innovation. It is only a happy accident for Taney that his judicial activism in the Morse case comports with much-later changes in patent law that made his opinion appear correct to our modern eyes — unlike Chief Justice Taney’s similar twisting of established law in other constitutional cases to reach results dictated by his personal political preferences.

- Joseph Scott Miller, *Reasonably Certain Notice*

In the Nautilus case, the Supreme Court held “that a patent is invalid for indefiniteness if its claims ... fail to inform, with reasonable certainty, those skilled in the art about the scope of the invention.” 134 S. Ct. 2120, 2124. We do not require perfect clarity because, as the Festo case highlighted, patentees can’t achieve it. We do not accept post hoc judicial salvage operations because, as the 1930s and 1940s functional-claiming cases highlighted, others can’t adequately plan around it. Reasonably certain notice, then, is just right: § 112 “require[s] that a patent’s claims, viewed in light of the specification and prosecution history, inform those skilled in the art about the scope of the invention with reasonable certainty.” Id. at 2129. How then, should the Patent Office and the courts determine whether claim language provides reasonably clear notice, for the protection of patentee and public alike? Reasonableness, a concept that pervades law, looks for the fit between means and ends and depends on the particular circumstances. This paper explores the contours of reasonably certain notice, using insights gleaned from other legal domains requiring reasonable notice, including matters as diverse as Due Process cases, class action practice under Rule 23, and qualified immunity in civil rights cases. All indicate that, to fairly judge the reasonableness of the notice that claim language provides, we must contextualize the claim language with far more robust data

about typical language usage in a given art at a given time than we currently consider. Happily, linguistics tools are readily available for analyzing usage in a large text corpora, and indefiniteness challenges are bound to call them into use.

- Oskar Liivak, The Unresolved Ambiguity of Patent Claims (<http://ssrn.com/abstract=2559958>)

*For well over a hundred years patent claims have been at the center of every patent related issue. Yet, what exactly does a patent claim claim? Exactly what type of thing is claim language intended to communicate? Despite their importance, patent law is confused about this central question. Some think of claims in the sense of “I claim to have invented the following things” while others think of them in the sense of “I claim exclusionary dominion over the following things.” These two views communicate quite different information and it impacts both substantive and procedural patent law. Generally, there is agreement about the legal effect of patent claims. Ultimately, in both views, patent claims determine a patent’s exclusion. But, how and why we move from claim text to exclusion differs considerably. The Federal Circuit, increasingly the Supreme Court, and patent scholars are all aiming to improve claim clarity yet all those efforts may prove fruitless unless this underlying ambiguity is first acknowledged and resolved. There cannot be clear and consistent patent discourse until the fundamental nature of patent claims is resolved. For example, In *The Interpretation-Construction Distinction in Patent Law*, Lawrence Solum and Tun-Jen Chiang take on some of the knotty linguistic problems associated with patent claims. Though I think the linguistic tools they develop are useful contributions, they failed to thoughtfully deploy them in patent law. Most importantly, they missed this unresolved, ongoing ambiguity in the linguistic meaning of claims. They simply presumed that the only way to understand claims is as direct delineations of patent exclusion. As a result their ultimate conclusions are premature if not mistaken. This response aims to first highlight this ambiguity and then it aims to resolve it. Once the confusion is understood, then it is clear that, though the legal effect of claims is to delineate exclusion, the only reasonable understanding of the linguistic meaning of claims is as “I claim to have invented the following things.”*

- Prof. Dr.-Ing. Sigrum Schindler, Quantification of Inventive Concepts

*This tutorial to “post-Alice patent-(non)eligibility” of an Emerging Technology Claimed Invention (ET CI) elaborates on the Supreme Court’s paradigm change as to its Substantive Patent Law (SPL) testing. This paradigm change enables any inventor/investor to protecting their high risk investments into ET R&D by much more robust patents than hitherto possible. They may achieve this gross increase of robustness of their patent on an ET CI by exactly defining and quantifying its inventive concept. The Supreme Court stepwise developed this fundamental notion of “quantifiable inventive concept” since *KSR*, over *Bilski/Mayo/Myriad/Biosig*, now having culminated in *Alice*. This tutorial provides a simple introduction to this fundamental notion of quantifiable inventive concept, as developed in the FSTP project (= facts screening, transforming, presenting) induced by the Supreme Court’s *Mayo* decision.*

Patent Presumptions / Procedure

- Jeremy Bock, An Error-Cost Assessment of the Presumption of Validity

In every trial involving a validity issue, a validity baseline specific to that case will be established based on the information presented to the jury. For example, an express jury instruction on the presumption of validity is optional under Federal Circuit law, such that by deciding to include (or exclude) an instruction on the presumption, a trial judge is establishing a particular validity baseline that may render it more (or less) difficult to prove invalidity. Prior to and during trial, a district judge has multiple opportunities for exercising discretion in (dis)allowing certain information to be presented to the jury. I argue that this baseline-setting mechanism is a policy lever that should be operated with reference to the relative social costs of erroneously invalidating patent claims (Type I errors) versus erroneously confirming their validity (Type II errors).

- Irina D. Manta (& Gregory Dolin), Taking Presumptions

For many years, a number of congressmen, academics, and judges have argued that the U.S. patent system is in trouble. The reasons for the problems were seen as twofold. First, the inundation of the system with “low-quality” patents created uncertainty about the legal status of the rights secured by the patents for both patentees and the public. Second, this vagueness of the scope of rights was used by the unscrupulous patentees to “extort” licensing fees from the industry in exchange for foregoing costly, and possibly ruinous litigation. After nearly a decade of debate, Congress came up with a solution that sought to solve both the quality and the high cost problems. In enacting the Leahy-Smith America Invents Act, Congress created new procedures within the Patent Office which would allow anyone to challenge the validity of an issued patent. Although these procedures look in many respects like a trial (with depositions, evidence, and a hearing), they fundamentally differ from what happens in federal court. The most important difference is that the statutory presumption of validity that attaches to all issued patents, and can only be overcome by clear and convincing evidence, does not apply. Indeed, no presumptions apply at all beyond the traditional requirement inherent in all legal matters that he who brings a case must shoulder the burden of proof. The AIA made this new regime applicable to patents that issued after the enactment of the bill, but also to all patents that had already been issued and were still within their enforceability period.

- Shubha Ghosh, What Makes a Case Exceptional? Fee Shifting as a Policy Lever

The Supreme Court's recent decision in Octane Fitness overruled the Federal Circuit's 2005 decision in Brooks Furniture, raising the standard for when a patent case is exceptional for the purposes of fee shifting. The current standard seems to be the one used by courts before the Brooks Furniture decision. This paper empirically examines how courts determined when a patent case was exceptional in the 2005-2013 period when the Brooks Furniture decision was the standard and in the 1982-2005 period, post founding of the Federal Circuit and pre-Brooks Furniture. The author has coded the published and unpublished district court opinions during these two periods and developed a statistical model to determine what variables were important for the district

court in awarding fees to the prevailing party. Variables measure the status of the parties, the type of patent, the existence of repeat players, and indicators associated with "patent trolls" of various sorts. The author also looks to see how the district court opinions were reviewed by the Federal Circuit. By placing the empirical study in the broader development of attorney's fee shifting in patent law, the author makes some preliminary assessments of the efficacy of using fee shifting as a policy lever.

- Greg Reilly, Patent Discovery: A Study in Litigation Reform

Proposed amendments to the Federal Rules of Civil Procedure to make discovery more "proportional" have provoked extensive public debate and opposition. Yet, Congress is considering far more fundamental discovery reforms, including reversing the 75-year old presumption that the responding party bear its own costs. These reforms have been largely overlooked simply because they are limited to one subject matter: patent litigation.

Discovery in patent cases is often seen as unique. It is said to be more extensive, more expensive, and more burdensome than in other civil litigation. These assumptions, and self-interested lobbying, are the impetus for the patent-specific discovery reform proposals in Congress and the courts. Yet, no serious analysis of patent discovery exists. What is the problem? Is it really different than in other civil litigation? What are its causes? What are the possible solutions? Do current reform proposals make sense? This Article offers the first academic analysis of these questions.

For the patent community, the Article disputes conventional wisdom that patent discovery is different in kind from other civil litigation. Instead, the problems are more extreme versions of those with civil discovery generally. It also rejects the popular view that patent discovery problems result from the abusive tactics of "patent trolls." Rather than "patent trolls" or even the technical complexity of patent cases, the most likely cause of disproportionately high patent discovery costs is complex and open-ended remedial doctrines for determining damages and "willful" infringement.

Perhaps it is time to reconsider whether the remedial precision supposedly offered by these doctrines justifies the costs they impose. Alternatively, patent litigation could be bifurcated into liability and remedial phases in its entirety, not just for trial. This would limit the most costly and burdensome discovery to the most meritorious cases. By contrast, current reform proposals would burden even the most meritorious claims based on concerns about the costs of defending against weak claims.

For those interested in litigation reform generally, the analysis of patent discovery offers three lessons. First, the high costs of modern litigation result not just from the design of procedural devices, as is often assumed, but also from the nature of the governing substantive law. Second, if litigation cost-savings cannot be targeted at the weakest claims, as they cannot in patent litigation because of the difficulty of evaluating the merits at the outset, they will be achieved through across-the-board cuts that burden even the most meritorious claims. This calls into question the opposition by those who support access to justice and plaintiffs' interests to procedures that screen out weaker claims

earlier in litigation, such as heightened pleading standards. Third, broad substantive rights can be preserved, plaintiffs' interests protected, and litigation costs reduced by a greater use of staged litigation—resolving the merits of some issues before proceeding in any way with the remaining issues.

International / Cross-Border

- Franck Gloglo, Exceeding the National Boundaries of IP Rights in Light of the WTO

The WTO Law consists of three major founding agreements, the GATT of 1994, the GATS, and the TRIPS Agreement, and an authoritative mechanism for strengthening these agreements led by the dispute settlement body (DSB). Prior to the WTO, many other international covenants dealt with IPRs issues, in order to obtain a minimal degree of harmony among specific domestic intellectual property law. However, the problem with these several existing conventions was their lack of authority in ensuring their member States' compliance and the absence of an effective dispute settlement mechanism. The theoretical case for stronger IPRs that the TRIPS agreement stands for, has shifted away national boundaries and reduced countries' power over their domestic intellectual property policy, without dealing with issues such as sovereignty, diversity, and legitimacy that pervade international relations. In fact, where prescriptive power resides in the TRIPS agreement, that power is typically the authority to set boundaries within which a WTO's Member can act rather than to impose a specific rule of law. This paper seeks to show the interest of the agreement for the global market, and prospect whether institutional changes are necessary.

- Sapna Kumar, Policing Digital Trade

Recorded history shows that people have engaged in international trade for more than 5000 years. Both contracts and customary practice gradually shaped modern trade law over goods. However, the rapid rise of internet-based digital trade has forced laws to adapt without the wisdom of historical practice. Copyright law was the first to change, as digital files began to replace compact discs, DVDs, and books. But until recently, patent law and trade law remained stagnant. Technology has only just begun to enable people to infringe patents with nothing more than electronic blueprints and a 3D printer. Because blueprints can be sold and electronically transmitted across borders, international trade laws are also implicated.

Under the Tariff Act, the International Trade Commission (ITC) has jurisdiction over articles that enter the country and infringe intellectual property. Recently, the ITC has vastly expanded its powers, asserting jurisdiction over imported data that infringes IP rights. Although the ITC currently lacks the power to block digital information before it enters the country, there have been attempts to expand the agency's jurisdiction. This poses disturbing implications regarding the breadth of the ITC's jurisdiction. This Article examines how laws can be adapted or changed to protect IP holders without stifling digital trade, invading our privacy, or violating protected speech rights under the First Amendment.

- Elizabeth Winston, Patent Boundaries

A patent grants a limited right to exclude others from practicing an invention within the United States, its territories and possessions. Much has been written about the limits of the patent grant and how to determine what the protected invention may be. At the same time, scholars have not systemically analyzed the geographic limitations of United States patents, a critical component of a patentee's limited right. A patent's geographical scope is not simple to discern. Commentators have neither analyzed the patent boundaries collectively nor delineated the scope of patent sovereignty on land, in the air and at sea. Patent law is territorial. Technology is not. Addressing the previously unappreciated ambiguity in patent law's geographic definition of its boundaries requires understanding the flaws in the current codification of patent law. It is time to delineate and codify the United States patent boundaries.

- David S. Levine, Temporal Transparency and the Process of Intellectual Property Lawmaking

The problem of public input, or the lack thereof, has permeated the negotiating process for the Trans Pacific Partnership Agreement (TPP) and Transatlantic Trade and Investment Partnership (TTIP), and particularly the highly-controversial intellectual property chapters. The primary reason for this lack of input is the pervasive secrecy that has characterized the process, where after five years of negotiation, not even a formal draft text has officially seen the light of day. This article addresses the purported need for that ironclad secrecy in the TPP negotiations and its impact on the often-used but rarely-defined concept of "transparency."

The article identifies the problem as a misunderstanding of the theory and nature of "transparency." Based upon the TPP and TTIP lawmaking processes, the article proposes a broad and modernizing theoretical shift in how we view governmental transparency by focusing on an overlooked component: timing. Defining transparency as a function of timing, it conceives "temporal transparency" as a unifying theory upon which to base analysis of the need for transparency in lawmaking processes.

This article also reorients transparency from a state of being to a condition, built upon processes rather than institutions. As but one example of application of this theoretical shift, it proposes a six-factor test for analyzing when, in a lawmaking process, a negotiating text should be made public and when it should remain secret. By reorienting transparency away from the amorphous concept of "sharing information" or "the right to know" and towards the core question of when such information should be disclosed, the temporal aspects of transparency are illuminated. Beyond TPP and TTIP, this theoretical shift would help create a better understanding of the need for and desire to create transparent decision and lawmaking processes generally.

Copyright

- Abraham Bell (& Gideon Parchomovsky), Copyright Trust

Collaborative production of expressive content accounts for an ever growing number of copyrighted works. Indeed, in the age of content sharing and peer production, collaborative efforts may have become the paradigmatic form of authorship. Surprisingly, though, copyright law continues to view the single author model as the dominant model of peer production. Copyright law’s approach to authorship is currently based on a hodgepodge of rigid doctrines that conflate ownership and control. The result is a binary system under which a contributor to a collaborative work is either recognized as an author with a full control and management rights or a person who is deemed a non-author with no rights whatsoever. We argue that the doctrines and judicial precedents that govern the all-important issue of authorship are out of step with authorial reality. And the cost to the copyright system is enormous. As we show in this Article the misalignment between copyright law and authorial reality is both inefficient and unfair: it harms incentives to create, it denies reward to contributors, it leads to under-utilization of content and it creates excessive litigation.

To remedy this state of affairs, we propose a new legal construct, which we call “copyright trust.” In designing this new tool we draw on insights from property and corporate theory—two areas of research that have long dealt with the challenges of collaborative enterprises and co-ownerships. The doctrine of copyright trust is predicated on the insight of decoupling ownership from control. Essentially, it would empower courts to appoint one contributor as an “owner-trustee” with full managerial rights and the exclusive power to control the use of the work, while recognizing all other contributors as “owner-beneficiaries,” who would be entitled to receive a certain percentage of the proceeds from the work. Copyright trusts would enable courts to retain the benefits of having a single owner without sacrificing the rightful claims of other contributors who would be entitled to receive a just reward for their efforts. The proposed doctrine of copyright trust would supplement, not replace, current doctrine. It is designed to enrich the menu of options available to courts in deciding authorship issues. The addition of our solution to the judicial toolbox would not only make it richer, but would also infuse current law with much needed flexibility that is sorely missing from other authorship doctrines.

- Rebecca Curtin, The Transactional Origins of Author’s Copyright

When discussing the origins of author’s rights in the Anglo-American copyright regime, commentators often refer to the rise of the Author in Enlightenment thinking or to the idealized notions of authorship espoused by the Romantics. As a matter of theory, it is no doubt true that these cultural developments helped to legitimate the idea of an author’s legal rights in his work. As a matter of practice, however, this paper will argue that the relevant stakeholders who lobbied for the first statutory recognition of author’s copyright in the eighteenth century were far more influenced by the transactions authors engaged in prior to the enactment of the Statute of Anne, transactions that in some cases gave authors greater rights in their work than the legal default required. Experience in the

marketplace helped to assure both authors and booksellers that licensing transactions could support the creation and distribution of books in a world in which, going forward at least, authors would hold copyright in their new works. Practice informed theory at this critical juncture in history and helped to change the legal and social norms associated with copyright. This project, which is in its early stages, draws on the records of the Stationer's Company, parliamentary journals, and unpublished authors' contracts from the eighteenth century and before, to uncover the transactional origins of author's copyright. In the process, this line of inquiry provides an opportunity to refine our understanding of the relationship between private ordering and the law.

- Ben Depoorter (& Alain van Hiel), The Dynamics of Copyright Enforcement

In an effort to combat online copyright infringements, copyright holders have deployed a wide range of strategies over the past two decades.

Content industries have targeted individual infringers by way of an extensive settlement demand campaign, the application of statutory damage awards in noncommercial file-sharing litigation, and the development of a copyright alert system in cooperation with Internet service providers. This paper conducts an empirical analysis of the effects of these copyright enforcement policies. On the basis of a series of survey studies that span a 15-year period, we measure the effect of various copyright enforcement policies on download behavior and public attitudes towards copyright infringement over time.

The results reveal a bifurcated landscape of regular file-sharers and non-infringers in which (1) copyright infringement actions are relatively unaffected by deterrence considerations; (2) copyright norms remain remarkably stable over time and across enforcement strategies. Our data provides an opportunity to reflect more broadly on the effectiveness of various deterrence strategies, including the comparative effects of public versus private enforcement, the role of enforcement intermediaries, and the tradeoffs involving the severity and certainty of enforcement.

- Elizabeth Townsend Gard (& Geena Yu), Is Fair Use Codable?

We are on a quest: to see if we can code fair use. We have spent the last year working on this project. We have taken a multifaceted approach. First, looking at literature about fair use, we looked to see if we could glean patterns that would help better understand fair use as of 2014. Then, Dr. Townsend Gard's Copyright Class focused on looking at 50 fair use cases to see if it was "codable". We had Kyle Courney of the General Counsel's office of Harvard come to chat with us about our results. Now, Dr. Townsend Gard and a 3L law student from the copyright class, Geena Yu, are embarking on the experiment of actually trying to code fair use into the Durationator. While duration is something fairly knowable (dates, for example), fair use is case-based, and much more fluid. Is there a way to make a tool to understand what courts have done? Is this informational? Could it ever be predictive? This paper explores our research and journey. The presentation will also discuss our findings, and hopefully, demonstrate the paths we have created, coding fair use, whether successful or not.

Cross-IP

- Mark Lemley (& Mark McKenna), Scope

Intellectual property (IP) law doctrines fall into three basic categories: validity, infringement and defenses. Virtually every significant legal doctrine in IP is either about whether the plaintiff has a valid IP right that the law will recognize—validity—about whether what the defendant did violates that right—infringement—or about whether the defendant is somehow privileged to violate that right—defenses.

IP regimes tend to enforce a more or less strict separation between these three legal doctrines. They apply different burdens of proof and persuasion to infringement and validity. In many cases they ask different actors to decide one doctrine but not the other. The U.S. Patent and Trademark Office, for example, decides questions of patent and trademark validity but not questions of infringement. Even in court, resolution of one issue is often allocated to a judge while the jury decides a different issue. And even where none of that is true, the nature of IP law is to categorize an argument in order to apply the proper rules for that argument.

The result of this separation is that parties treat IP rights “like a nose of wax, which may be turned and twisted in any direction.” When infringement is at issue, IP owners tout the breadth of their rights, while accused infringers seek to cabin them within narrow bounds. When it comes to validity, however, the parties reverse their position, with IP owners emphasizing the narrowness of their rights in order to avoid having those rights held invalid and accused infringers arguing the reverse. Because of the separation between validity, infringement, and defenses, it is often possible for a party to successfully argue that an IP right means one thing in one context and something very different in another. And courts won’t necessarily detect the problem because they are thinking of only the precise legal issue before them.

The result is a number of IP doctrines that simply make no sense to an outsider. In patent law, for instance, it is accepted law that there is no “practicing the prior art” defense. In other words, one can be held liable for doing precisely what others had legally done before, even though a patent isn’t supposed to cover things people have already done. In design patent law, one can be held liable for making a design that an “ordinary observer” would find too similar to a patented design, even though the things that make the two look similar—say, the roundness of the wheels on my car—are not things the patentee is entitled to own. In copyright, once a court has concluded that someone has actually copied from the plaintiff, a song can be deemed infringing because of its similarity to a prior song, even if the similarity is overwhelmingly attributable to unprotectable standard components of the genre. And in trademark, a party can be deemed infringing because its products look too similar to the plaintiffs and therefore make confusion likely, even if that confusion is likely caused by non-source-designating features of the design.

IP has created various stopgap doctrines to try to deal with these holes in IP law. Copyright law, for instance, says expression cannot be protected if there are too few alternative means of expression, so that one author's way of putting something has "merged" with the idea they are expressing. Trademark law has tried to prevent overreaching in product configuration protection by making it hard to have a valid product configuration trade dress at all. But even these efforts to patch the system are doomed to fail at determining the proper scope of an IP right, for the simple reason that they are themselves either validity or infringement doctrines and are therefore subject to the same nose of wax problem as different decisionmakers tackle different pieces of the issue at different times.

The culprit is simple, but fundamental: IP regimes largely lack an integrated procedure for deciding the proper extent of an IP right. Without some way of assessing how broad an IP right is that considers validity, infringement and defenses together, courts will always be prone to make mistakes on any one of the doctrines. In general, these mistakes tend to redound to the benefit of IP owners, as courts are more reluctant to declare an IP right invalid altogether even when the defendant should not be liable for infringement. But sometimes the mistakes run the other way, as when the fact that the plaintiff is improperly seeking to expand the scope of her legitimate but narrow right leads a court to hold that right altogether invalid.

In this article, we suggest that IP regimes need a process for determining the scope of an IP right. Scope is not exactly validity, and it is not exactly infringement. Rather, it is the range of things the IP right lawfully protects against competition. IP rights that claim too broad a scope tend to be invalid, either because they tread on the rights of those who came before or because they cover things that the law has made a decision not to allow anyone to own. IP rights with narrower scope are valid, but the narrowness of that scope should be reflected in the determination of what actions do and do not infringe that right. And whatever the doctrinal label, we should not allow an IP owner to capture something that is not within the legitimate scope of her right. Nor should it follow from the fact that some uses are outside the lawful scope of an IP owner's right that the IP right itself is invalid and cannot be asserted against anyone. Only by evaluating scope in a single, integrated proceeding can courts avoid the nose of wax problem that has grown endemic in IP law. Scope is, quite simply, the fundamental question that underlies everything else in IP law, but which courts rarely think about expressly.

One IP regime—patent law—has started in the last two decades to think about scope in a more systematic way through the process of claim construction. Patent courts hold a pre-trial Markman hearing to determine what the patent does and does not cover; they use that determination to inform both validity and infringement. Claim construction has its share of problems, and patent law has not entirely avoided the nose of wax problem, but we think patent law is on the right track in trying to resolve these questions in an integrated fashion rather than allowing inconsistent assessments of scope in separate validity and infringement proceedings. Other IP regimes can look to a modified form of the Markman model as they design their own doctrines of scope, learning from its shortcomings while trying to modulate the breadth of permissible IP rights.

In Part I, we discuss the current divided structure of IP regimes, explaining how validity, infringement, and defenses are often evaluated at different times by different parties applying different standards. In Part II, we discuss the problematic consequences of that separation for each of the major IP regimes. Finally, in Part III we propose that IP adopt a unified scope proceeding, drawing inspiration—but also some caution—from patent law’s Markman experiment.

- Ari Waldman, Trust: The Distinction Between the Private and the Public in IP Law

How to draw the line between public and private is a foundational, first-principles question of privacy law, but the answer has implications in intellectual property. Both patent law—through the “public use” bar—and trade secret law—through the problem of limited disclosures of confidential information—confront the question of whether legal protection should extend to information previously disclosed to a small group of people. This project is one in a series of papers on the effects of defining the boundary between public and non-public information through the lens of social science and, in particular, interpersonal concepts of trust among individuals. Patent law’s “public use” bar appears to use a secrecy/assumption of risk paradigm for drawing the line between public and non-public uses. This strategy has unintended negative effects, including discouraging experimentation and legitimizing a doctrine that endangers personal privacy in other contexts. Trade secret law, on the other hand, considers the nature of the relationship between the owner of information and its recipient as part of an analysis focusing on the social context of a given disclosure. This standard tracks more closely to the best social science evidence of how and why individuals and inventors share information and would encourage experimentation and lead to greater social welfare from new innovations.

- Jessica Silbey, IP and Constitutional Equality

Intellectual property reform most often questions the most effective levers for “promoting progress” and incentivizing creativity and innovation. However, substantial ambiguity exists as to what “progress” means, particularly in some of the most notable (and critiqued) court cases interpreting intellectual property statutes (viz Golan, Eldred, Bowman). What is the content of “progress” towards which IP law reaches? I am beginning a project exploring this question from two perspectives: (1) qualitative empirical data from a data set I developed over six years (long-form interviews with IP professionals and creators and innovators) and (2) Supreme Court IP jurisprudence. This paper for WIPIP 2015 focuses on the second perspective, rereading recent Supreme Court cases about IP to exhume underlying themes that might shed light on meaning of “progress.”

Perhaps surprisingly, by my close reading, the Supreme Court cases express a range of equality modalities—e.g., Aristotelian equality, anti-subordination equality and distributive justice (basic capability equality)—as they make sense of IP regulation as consistent or inconsistent with the constitutional prerogative of “progress.” Looking closely at a handful of Supreme Court cases—such as Eldred, Grokster, Golan, Kirtsaug and Aereo and several patent cases including Bilski, Myriad, Alice Corps, and Bowman—reveals arguments structured around one (if not more) of these constitutional

modalities of equality. This paper will highlight these equality modalities as overlooked features of this Supreme Court IP jurisprudence, which appears to envision deeply rooted equality norms as central to promoting innovation and creativity.

The role of equality norms in cases about IP may be strange or counterintuitive. In contrast to the utilitarian theory of IP, many of these Supreme Court cases suggests that equality is a governing principle for the just distribution of IP rights (as well as IP's exceptions and limitations). In fact, the Supreme Court's analyses about the proper scope and strength of IP statutory provisions explicitly elaborates upon constitutional modalities of equality as developed in other areas of law, such as in gender and race discrimination (e.g., equal pay cases and affirmative action cases). What risks exist in reading IP through these equality lenses? If critiques of some of these Supreme Court cases have continuing merit (such as those focused on Eldred, Golan, Aereo or Bowman), can we better understand what went wrong (and what could go better in the future) by attending to the equality discourse they contain?

- Gregory Mandel (& Kristina Olson & Anne Fast), What People Think, Know, and Think They Know About IP

The ease of copying enabled by modern technological advance, combined with high profile debates about online pirating, the affordability of patented medication, and other policy questions, have brought intellectual property law into mainstream popular discourse and policy debates. Despite the growing importance of popular understanding to the success of the intellectual property system, this relationship has barely been examined. This article reports the most in depth study ever of popular understanding, preferences for, and reactions to intellectual property law.

The results of the intellectual property studies are dramatic: even though American adults possess very low knowledge about intellectual property, they clearly believe that current intellectual property protection is too strong. The majority of the public supports copying of all manner of copyrightable and patentable subject matter tested in a wide variety of circumstances prohibited under actual intellectual property law. Contexts where popular opinion runs contrary to law include when only a portion of a work is copied, where the copier makes a change to a work, if the copier does not receive financial compensation, and when the copier simply provides accurate attribution to the author or inventor. These results raise significant questions concerning the public legitimacy of intellectual property law and its ability to influence user compliance, incentivize creative endeavors, and achieve widespread public support.

Biotech

- Peter Lee, Centralization, Fragmentation and Replication in the Genomic Data Commons

Researchers around the world generate enormous amounts of genomic sequence data and related information. Various policies require rapid release of such information into public databases, thus creating a genomic data commons. Although this repository has been lauded as accelerating collective productivity, closer examination complicates the question of whether and to what extent it truly operates as a commons. For instance, in more recent data release policies, the genomic data commons has transitioned from a highly open structure toward a governance regime of selective access and exclusivity. This paper builds on prior scholarship to examine additional governance challenges of the genomic data commons, illustrating how this repository of information operates both more and less like a commons than previously thought. Delving into the science of genome sequencing, assembly, and annotation, it highlights the indeterminate nature of sequence data and related information, thus giving rise to a need to clean, correct, and update existing data. Drawing on the Institutional Analysis and Development framework, this paper examines four approaches for performing these functions: author-centric data management, third-party biocuration, community-based wikification, and specialized databases and genome browsers. Notably, these approaches reveal deep tensions between centralization and fragmentation in the structure of the genomic data commons. On the one hand, author-centric data management and third-party biocuration represent highly centralized mechanisms for controlling data. On the other hand, wiki-based annotation disperses control throughout the community, exploiting the power of the commons and parallel data analysis to update existing data records. Attempting to capture the best of both worlds, specialized databases and genome browsers exploit replication and nonrivalry to preserve original data records while allowing users to codify vast amounts of value-added knowledge. Among other implications, this study shows that far from a being a passive repository of information, the genomic data commons is a teeming, dynamic entity in which communal intervention is critical to enhancing collective knowledge. Ultimately, the genomic data commons is an intensely human commons in more ways than one.

- Jacob S. Sherkow (& Henry T. Greely), The History of Patenting Genetic Material

This review, to be published in Volume 49 of the Annual Review of Genetics, examines the history of patenting “genetic material”—the nucleotide sequences and chemical structures of the ribonucleic acids, DNA and RNA, that make up the “genetic code.” It is primarily the doctrine of patentable subject matter, or patent eligibility, that governs which classes of inventions are eligible for patent protection. Although only nominally controlled by statute, the judiciary has long excluded “products of nature” from patent protection. Difficulty in demarcating “products of nature” from man-made alterations of those products led the Court of Appeals, in 1911, to declare that products “isolated and purified” from their surrounding environments were eligible for patent protection.

Beginning in the late 1960s, the “isolated and purified” doctrine allowed the first patents on genetic material itself, including patents on viral RNA (U.S. Patent No. 3,689,475), DNA and RNA from cell-free extracts (U.S. Patent No. 4,668,624), and tRNAs (U.S. Patent No. 4,213,970). As nucleotide sequencing progressed, researchers also began to patent nucleotide sequences of genes, themselves. (E.g., U.S. Patent No. 4,447,538, for chorionic somatomammotropin.) The practice of patenting “genes” quickly generated controversy within the scientific community, coming to a head during the National Institute of Health’s efforts to sequence the entire human genome in the 1990s. Nonetheless, even though many genes were patented at the time, virtually no patent holders engaged in litigation.

After Myriad Genetics became the first entity to sequence—and patent—BRCA1 and BRCA2, however, the company engaged in a vigorous campaign to enforce its rights against diagnostic clinicians through patent infringement actions. The resulting lawsuits ultimately led the Supreme Court, in 2013, to declare that “isolated human genes” were not patentable subject matter, despite the “isolated and purified” doctrine. The Court did, however, reserve patent eligibility to cDNA, primers, and probes.

While the decision has been widely viewed as a watershed moment in the history of patenting genetic material, its practical effect is likely to be minimized by advances in both genetic technology and the biotechnology industry. Namely, because the genomes of many species have since been published, obtaining patent protection for known genes and their analogues has become extraordinarily difficult. Furthermore, because “next generation sequencing” technologies appear to not infringe traditional “gene patents,” the sort of disputes giving rise to the Myriad litigation are unlikely to reoccur. The history of genetic patenting may be close to its end, over a century later.

- Saurabh Vishnubhakat (& Arti Rai & Bhavan Sampat), The Rise of Bioinformatics Examination at the Patent Office

This article describes the creation and its implications of a new USPTO examination art unit to review bioinformatics patent applications. These applications claim interdisciplinary inventions from the biological sciences as well as from software and information sciences, and the USPTO initially assigned them to examiners in a variety of art units, even outside the agency’s Technology Center 1600 which typically handles biotechnology and pharmaceuticals. To ensure the uniform examination of these applications, the USPTO in 1999 created Art Unit 1631 to be staffed with examiners trained in biology and familiar with computer science. We explore the examination histories of an early cohort of patent applications assigned to AU 1631, which broadly embraces inventions that combine biology with computer implementation, inventions that use algorithms to predict gene function and protein folding, and inventions that apply in silico screening assays for identifying drug candidates, but which excludes inventions related to biomedical imaging and stimulation of organ function. We also compare these examinations with those of a control group of applications assigned to a related art unit for data processing technologies that are more traditionally software-oriented.

Patent—SSOs and Pledges

- Kristen Osenga, Everything I Needed to Learn About SSOs I Didn't Learn in Law School

There is an overarching myth that technology standards are set in dark rooms by a few men in cigars, all of whom have wildly entrenched interests in cutting deals to their benefit. However, the reality is that standard setting organizations (SSOs) do not really work this way. There are multiple people in the room, some who have IP rights in the proposed technologies at issues and others that don't. Most of the people in the room are scientists, engineers, product developers—not lawyers and deal makers. The mission is generally to find the best technological solution to a scientific puzzle (most often operability).

The problem with this disconnect between myth and reality is that legal and policy decisions regarding SSO behavior and treatment of standard essential patents (SEPs) are largely driven by the myth. To craft better legal doctrines and sound policy in an area as important as technology standards, it is important to get behind the myth and examine the reality. This paper explains how judges and commentators think SSOs and SEPs (and patent pools) work, how these entities and ideas actually work, and why the disconnect is leading to less-than-optimal legal and policy decisions.

- Jurgita Randakeviciute , The Role of Standard Setting Organizations With Regard to Balancing Rights

Technology standardisation, if properly performed, leads to benefits, both to the economic system and to the consumers. It is claimed that technology standards reduce the transaction costs of modularity, foster specialization and division of labour, promote competition of inventors and producers within standards. However, due to the fact, that standards are usually protected by standard-essential patents (SEPs), standardization may impede the access to the standardized technology and create entry barriers into the market for those, who do not own SEPs.

The afore-described events inevitably cause tension between the owners and the users of SEPs. In order to keep the balance between the interests of afore-specified parties, standard setting organizations (SSOs) come into play by requiring SEP owners to license SEPs on fair, reasonable and non-discriminatory (FRAND) terms. However, such an attempt to provide competitors with the right to use SEPs while satisfying the financial interests of the SEPs' owners quite often lead to extensive and multi-jurisdictional litigation, which impedes the access to the standardized technology, thus, a re-consideration of the role of SSOs is needed.

In this paper, it will be claimed, that standardization procedure concerns not only agreeing upon a standard, but also comprises the actions of making the standard work, making it available for the industry and its users. That requires a standard to be spread to all the participants of a specific sector by licencing SEPs. However, taking into consideration the case-law in SEP-related disputes, it is clear, that many courts lack the

necessary economic, technical and industry- specific knowledge to make decisions effectively, and, thus, the access to SEPs is not maintained. Therefore, SSOs should step in while solving the SEP-related disputes, which take place after the adoption of the standard and, this way, improve the access for the users to the standardized technology.

For the purposes of achieving the afore-specified objective, the main tasks of this work would be the following:

- *To discuss the current role of SSOs and their IPR policies in the process of standardization.*
- *To analyse the issues occurring in the standard setting procedures, that may lead to the obstructed access to SEPs (e.g. patent ambush, SEP and FRAND-related disputes, possibility of the injunctive relief).*
- *To provide recommendations on the amendments to the functions of SSOs during the standardization procedures and after the standard is set, in order to improve the access of SEPs to the potential users.*

- **Jorge Contreras, Patent Pledges**

A growing number of firms are making voluntary public commitments to limit the enforcement and other exploitation of their patents. I term these commitments “patent pledges”. The best-known category of patent pledge is the so-called FRAND commitment, in which a patent holder commits to license patents to manufacturers of standardized products on terms that are “fair, reasonable and non-discriminatory.” But patent pledges have been appearing in fields and environments well beyond technical standard-setting, including open source software, green technology and the biosciences. Pledges include FRAND commitments, as well as commitments not to assert patents against specified technologies, not to bring infringement actions against certain types of infringers, and not to transfer patents to non-practicing entities. This article draws upon the public database of patent pledges compiled by the author and others to provide a comprehensive descriptive account of patent pledges across the board. It offers, for the first time, a taxonomy of pledge structures, content and settings, and identifies common goals and objectives of firms making pledges. It also analyzes legal and practical issues that will face those who make and receive patent pledges, including enforcement, detection, permanence, transfer of underlying patents and the advisability of state action in this area. Finally, the article invites further research and study of this emerging phenomenon.

Copyright

- **Brad Greenberg, Black Box Copyright**

The apparent simplicity of a copyright infringement claim—was a work copyrighted and was it used without permission?—belies the complexity introduced by new technological mediums. Though copyright law is designed to treat unforeseen and extant technologies similarly, new technologies may introduce a new locus of inquiry, raising questions about valuing substance over form. Should judges look internally at the technological design or instead focus externally on the technological output? Numerous cases from the past forty

years demonstrate that this internal-external decision is determinative. Yet, courts continue to diverge on approach and scholarly literature lacks an account of the proper perspective.

This paper analyzes copyright law's problem of perspective and offers what I call a black box perspective. Focusing on the policy goals that animate the 1976 Copyright Act and the directions in which internal and external perspectives drive innovation, I argue that copyright law is primarily concerned with technological output, not design—that the law cares about what a technology does, not how it does it. This perspective has important implications for existing copyright law, especially as it is applied to new technologies, and for copyright reform. In particular, I propose that exclusive rights should be balanced with general limitations, such as a digital first sale doctrine, that also adopt a black box perspective.

- Annemarie Bridy, *Aereo: From Working Around Copyright to Thinking Inside the (Cable) Box*

Aereo's critics faulted the service for attempting to take advantage of a perceived loophole in copyright law—for, as Dan Burk more neutrally describes it, trying to “invent around” the edges of the statute and the exclusive rights it confers on copyright owners. This criticism of Aereo was echoed in the Supreme Court's decision, which yoked Aereo to an old technology, cable TV, to bring it within the established scope of the public performance right. In a bid to make lemonade from lemons, Aereo embraced the old-tech identity thrust upon it by the Court and invoked the Copyright Act's statutory license for cable operators, which would allow it to pay non-market rates for content licenses. The service, however, now faces the uncomfortable possibility that it is not different enough from cable to fall outside the scope of the public performance right but not similar enough to cable to qualify for the statutory license in Section 111. This talk will explore Aereo's post hoc efforts to “think inside the box” of Section 111. More broadly, it will consider what the ultimate fate of those efforts may reveal about how copyright's interplay of rights and exceptions, particularly existing statutory licenses, impacts emerging technologies.

- Aaron Perzanowski, *Digital Property: The Uncertain Future of Ownership*

Over the last decade, digital technology has quietly eroded the foundations of personal property. Books, photos, movies, music, and video games—once preserved as analog objects in our living rooms, cars, basements, attics, and backpacks—are now more commonly stored on digital devices and cloud servers. These socio-technological shifts have been accompanied by legal ones as well. Just as the combination of expansive online storage, digital distribution channels, and technological access controls have removed media from our hands and homes, aggressive intellectual property regimes and restrictive contractual provisions have sought to undermine, if not eliminate, consumer personal property interests in the intangible digital goods we acquire. Increasingly, consumers are regarded not as the owners of their media libraries, but as licensees.

Nor are these trends confined to purchases of digital media. Smart phones, self-driving cars, networked refrigerators, wearable technology like Google Glass, and the emergence of the Internet of Things promise to fundamentally alter our relationship with the objects we have traditionally considered our personal property. Like retailers of digital content, the makers of these devices often insist that consumers are merely licensed to use these products and frequently prohibit consumers from lending, reselling, or even repairing them.

As familiar forms of ownership disappear with little public outcry, one might ask, “What’s the big deal? Aren’t we better off in a world where all the content we want is accessible in the cloud? Why should we lament the end of personal property?” The problem is two-fold. First, despite the insistence of digital media retailers and device makers, personal property ownership serves important societal purposes. It helps preserve and promote access to important cultural works; it protects our privacy as consumers from surveillance and intrusion; it encourages competition and conservation of resources; and it provides balance between the interests of business and consumers. The current trend away from personal property rights undermines consumer protection and competition policies without providing new safeguards against abuse.

Second, centuries of practice, reinforced through legal rules, have established a clear set of consumer expectations regarding their personal property rights. When a consumer walks into a store and exchanges cash for a book, she knows that she owns it. And she knows what her ownership entails. She can read her book, lend it to a friend, sell it in a yard sale, donate it to the local library, or bequeath it in her will. But when the same consumer acquires an ebook, that clarity disappears. After she clicks the prominent “Buy Now” button on her preferred digital retail site, she might reasonably expect her purchase to convey the same sort of property interest she enjoyed in her hardcover book. However, copyright law, form contracts, and technological constraints all conspire against her ability to sell, lend, or gift her purchase. Even her rights to possess and read her ebook are subject to decisions by publishers or retailers to revoke her access, as Amazon did when it remotely deleted books—including George Orwell’s 1984—from consumers’ devices.

Although these shifts affect nearly everyone, until recently they have gone almost entirely unnoticed outside of a small circle of scholars and consumer rights advocates. But recent litigation, legislation, administrative hearings, and media reports suggest a growing awareness of the widening gap between familiar notions of property ownership and the reality consumers face today. This book will trace the legal, marketplace, and technological developments that have contributed to this gap, outline its implications, and chart a reform agenda to restore stable, reliable consumer property rights. We hope that by highlighting these shifts in the relationship between consumers and the products they acquire, we can reinforce the nascent public recognition of the importance of personal property rights.

- Felix Wu, Secondary Copyright Remedies

The recent call for a Next Great Copyright Act provides an opportunity to rethink aspects of copyright law that have thus far been constrained by the existing statutory structure. Others have proposed changes to secondary liability or to copyright remedies, but in addition to thinking about those areas individually, much could be gained by thinking about their intersection. Because the law of secondary liability in copyright is primarily judge-made law, there has been little opportunity to tailor remedies in cases of secondary liability. Liability is liability and results in the full panoply of statutory remedies being available. But secondary liability raises issues of technological innovation and freedom of expression beyond those raised with respect to direct liability. When immunity is the only tool available to address those concerns, it rightly meets resistance. Limiting remedies might be a better way to address those concerns, while still recognizing the importance of adequate copyright enforcement. Some possibilities include limiting or eliminating statutory damages, replacing damages measures with more restitutionary ones, and heightening the copyright owner's burden of proof with respect to remedies.

Saturday, February 7, 2015, Session 1: 9:00–10:40

Patent—NPEs

- David Schwartz (& Christopher Cotropia & Jay Kesan), Patent Assertion Entity (PAE) Lawsuits

Is most patent assertion entity (PAE) litigation frivolous? Conventional wisdom holds that most of the lawsuits brought by PAEs are of low quality and are settled quickly for substantially below the cost of defense. If almost all of the lawsuits brought by PAEs are frivolous, then PAE litigation is societally harmful. Empirical support for the conventional wisdom, however, is very thin.

To rigorously study these questions, we study settlement behavior and litigation outcomes of lawsuits brought by different types of PAEs. We began with a dataset we previously compiled that includes the entity status of all patent holders (i.e., individual inventors, patent holding companies, patent aggregators, universities, failed start-ups, etc.) in lawsuits filed in 2010. We expanded to the dataset to include the timing and type of disposition for each defendant in each lawsuit. The completed dataset permits us to assess whether there are differences in litigation durations and outcomes by entity type.

In this paper, we report detailed information about case duration, settlement, and resolution on the merits for the various types of patent holders. We find there are differences among the various entity types. Surprisingly, we find that the true outliers are not patent holding companies, which are the subject of much academic and public ire. Instead defendants sued by individual inventors are much more different from other parties. We set forth how these differences may be relevant to patent policy and potential reform efforts.

- Nicole Shanahan, How Data Liberation Will Nix the Proverbial Patent Troll

This article traces the history and evolution of patent monetization models and explores each models characteristic strengths and weaknesses. These business models, which are inherently part monetization and part enforcement, have changed over time, and the law has been unable to deal with resulting downstream pathologies such as holdup and the inability of stakeholders to accurately value relevant patent assets. The article explains that instead of legal approaches to solving the proverbial “patent troll” problem, it is the big data revolution that has the most potential to have an impact on the marketplace for patents and in doing so, solve many of the economic asymmetries currently plaguing the transactional ecosystem. In particular, I explain that improvement of the availability of patent data, for example the creation of a real-time PAIR API, will lay the groundwork for systemic innovation and access to low-friction deal making between stakeholders. I argue that patent trolling as an industry will begin to become a less attractive business model as patent owners and patent seekers utilize more direct methods of transacting enabled by big data, such as using web-based licensing tools with low to no transaction costs.

- Paul R. Gugliuzza, Patent Trolls, Preemption, and Petitioning Immunity

Patent law is usually thought to be the domain of the federal government, not state governments. Yet eighteen states have recently passed statutes outlawing false or bad faith assertions of patent infringement. Those statutes are aimed at fighting so-called patent trolls, particularly those who send letters to thousands of users of allegedly infringing technology—as opposed to the manufacturers of that technology—demanding that each user purchase a license for a few thousand dollars or else face an infringement suit. Current preemption doctrine, however, largely prohibits the states from regulating the enforcement of federal patents. Moreover, because the Federal Circuit has grounded this “preemption” principle in the First Amendment’s Petition Clause, rather than solely in the Supremacy Clause, the federal government likewise has little power to outlaw actions related to patent enforcement. Accordingly, this article argues for a reimagined patent preemption standard, one that is consistent with the long history of courts enjoining unfair and deceptive schemes of patent enforcement—a history the Federal Circuit has mostly ignored.

- Roger Ford, the Uneasy Case for State Anti-Patent Laws

Several states have enacted laws in recent years that seek to limit the ability of patent-holders to enforce their patents within the enacting states. There is an easy case to be made against these laws: the patent system relies on nationwide uniformity to fulfill its notice and incentive purposes, and if they became widespread and effective tools against patent holders, state laws could substantially disrupt this uniformity.

There is, nevertheless, an uneasy case that these laws are a good thing, in both theory and practice. Patent law has a public-choice problem. Patent holders and applicants are a concentrated interest group, at least compared to the group of possible patent infringers. We should expect, then, the scope and strength of patent protections to expand over time; indeed, the widespread complaints about the patent system over the last few decades suggest this has happened. States offer their own opposing interest groups: businesses located within each state. States pushing back with anti-patent laws, then, may represent an effective second-best solution to the problem of patent expansion.

Patent—Rationales

- Ofer Tur-Sinai, Patents, Well-Being, and the State’s Role in Directing Innovation

This project concerns the criterion of well-being adopted by the state in the context of innovation law and policy. The questions of what well-being is and which criterion of well-being the state should adopt are extensively debated by philosophers and a discussion of these issues had also recently emerged in legal literature. However, analysis of patent law by courts and scholars alike is overwhelmingly framed in economic terms. Consequently, the concept of technological progress that patent law is set to promote is rather simplistic: It includes primarily those future goods that current market participants would value the most, or in other words—“new stuff that sells”. In this work-in-progress, I intend to demonstrate the shortcoming of this narrow perspective

and explore the possibility of using alternative criteria of well-being in the context of innovation law. Among other things, I will argue that the mere fact that a future technology is likely to have a demand in consumer markets does not necessarily imply that such technology would enhance the well-being of its consumers, and hence, that it is worthwhile for the state to incentivize its development. This conclusion is reinforced when considering the alternative investments to which the resources invested in the development of such technology could otherwise have been allocated. In support of this argument, I intend to use, among other resources, recent studies conducted by economists and psychologists, which attest to the lack of positive correlation between technological prosperity and subjective well-being. For this and other reasons, I will argue that innovation policy cannot be predicated solely on economic efficiency considerations and highlight the potential benefits of using a more objective theory of well-being as the governing framework for the discussion of innovation law. The adoption of such new perspective may have important normative implications. Among other things, the use of a more objective criterion of well-being seems to bolster the arguments in favor of using alternative methods of stimulating innovation, such as prizes and grants, in lieu of patent law.

- Lucas Osborn (and Joshua M. Pearce), A New Patent System for a New Age of Innovation

This Article first demonstrates how new and emerging technologies are radically altering the relative costs and benefits of the patent system by significantly reducing the research, development, and commercialization costs (collectively, “innovation costs”) that are used to justify the patent system’s existence. These technologies include the obvious—the internet, the newly established—cloud computing, and the emerging—3D printing and molecular engineering.

As innovation costs decrease, the neoclassical economic justification for the patent system comes under stress and begins to interact significantly with social science research outlining non-monetary incentives for innovation. This article explores what changes should come to the patent system assuming the average cost of innovation have fallen significantly (e.g., at least by half and perhaps much more). All things being equal, if average innovation costs decrease significantly, the relative need for the patent system will decrease from an economic-incentive viewpoint. As the need to recoup R&D expenses decreases, the importance of non-monetary incentives becomes proportionally greater. This article explores these interactions and makes recommendations for how to change our patent laws—albeit gradually—to account for technologies that lower the costs and risks of innovation.

- Srividhya Ragavan, Reorienting Patents as the Protagonist for the Progress of Useful Arts

Contemporary discussions of patent law posit and couch this regime within property terms. Such a conception of this area of law ignores the overlay of the law of contracts over theories of intellectual property law, especially patent law. The characteristic feature of contract law, over which patent law is heavily based, imposes corresponding

obligations or responsibilities over the rights holder. Perhaps, the prevailing notions of patents as an extension of property rights leads one to construe patents in terms of its "rights" and is rarely theorized from the obligation perspective. That is, property law posits rights in correlative terms and thus, defines it from the perspective of the duty of third parties which concretizes the rights. This article constructs the role and place of exclusivity from the contractual overlay of patents. It asserts that such a construct gleans the presence of a corresponding (as opposed to correlative) duty as part of the government grant that goes beyond the incentivizing and dissemination objectives of the system. It traces such a duty back to the historic origins of the system and asserts that recognizing the obligations of the inventor to those who perform the correlative obligations which entails him the exclusive rights would reposition the system to achieve its historically preordained position. Such a reformulation is not a new way of understanding the system. It is merely a reorientation to achieve the objectives for which the system was established in the first place.

- Stephanie Bair, The Psychology of Innovation and Theories of Patent Protection

Empirical psychological studies show that individuals are often internally motivated to create and will do so without the promise of external reward. Based on this finding, a number of intellectual property scholars have suggested that patent rights be reformed or eliminated altogether as superfluous and wasteful.

But this argument does not address the fact that providing incentives to create, though perhaps the primary economic account for the intellectual property system, is not the only justification. For the patent system in particular, scholars have proposed several other utilitarian defenses, including: (1) prospect theory, under which broad patents are granted early to a single firm to promote efficiency in research and development and incentivize further innovation within the scope of the patent; (2) disclosure theory, under which the inventor receives a monopoly in exchange for disclosure of his invention; (3) commercialization theory, under which a patent is granted to incentivize expensive commercialization activities; and (4) patent racing theory, under which the availability of a patent encourages beneficial racing that speeds the pace of innovation. A number of non-utilitarian justifications have also been proposed, including: (1) fairness, under which an inventor is rewarded for the fruits of his labor; (2) personality theory, under which a creator is given a monopoly in recognition of the personality interest he retains in his invention; and (3) distributive justice, under which monopoly rights are awarded with the goal of creating a just and superior culture.

Thus, if the patent system is to be modified in light of insights from the psychology literature, a rigorous application of these insights to each of the justifications for the system is in order. I undertake this analysis in my Article, and conclude that, for a patent system that is structured (like ours) as a primarily financial reward, the behavioral literature is particularly compatible with the commercialization defense of patents. But the behavioral literature also suggests that non-financial incentives, most notably an attributional reward, can be an effective means of accomplishing many of the goals proposed by the various theories of patent protection. I conclude by suggesting some reforms to our current patent system based on these insights.

Cross-IP

- Clark D. Asay, Intellectual Property Law Hybridization

Traditionally, patent and copyright laws have been viewed as separate bodies of law with distinct goals. Patents aim to incentivize the production of inventive ideas, while copyright focuses on encouraging and protecting the original expression of ideas, but not the underlying ideas themselves. This divide between patent and copyright laws finds some support in the Constitution's IP Clause, and Congress, courts, and commentators have largely perpetuated it in enacting, interpreting, and analyzing copyright and patent laws over time.

This Article argues that this traditional divide should be partially breached. It proposes doing so by adjusting each of copyright and patent law remedies so that each body of law more explicitly recognizes and facilitates the purposes of the other body of law. The Article argues that such hybridization efforts are warranted because of the interdependent nature of much creative and inventive activity. One often spurs the other, and without explicit recognition of these realities in each of copyright and patent law, each body of law on its own is less effective than it could be in satisfying their common constitutional mandate of "promoting the progress of Science and the useful Arts." Indeed, much modern research shows that the creative processes that lead to both copyrightable expression and patentable invention are often so intertwined as to make neatly dividing and protecting each under separate bodies of law difficult. Furthermore, some recent scholarship suggests that, based on the historical record, the IP Clause of the Constitution is best interpreted as assuming the interdependent nature of creative and inventive activity.

On this basis, this Article argues that adjusting remedies under each of patent and copyright law would help hybridize intellectual property law in ways that facilitate the interdependencies of creative and inventive activity. It proposes changes to the fair use defense under copyright law and injunctive relief standards under patent law in pursuit of such intellectual property law hybridization. The Article then applies these proposals to two significant recent legal disputes that implicate both copyrightable expression and patentable invention. It concludes by suggesting that further research into the interdependencies between creative and inventive activities, and how the law should respond to them, is merited. Indeed, I argue that such hybridization efforts are not only warranted within the intellectual property realm, but within the law more generally.

- Patrick Goold, IP Law and the Bundle of Torts

Lawmakers and scholars frequently refer to 'the tort of copyright infringement' and 'the tort of patent infringement.' Underlying these statements is a belief that copyright infringement and patent infringement are two discrete and individual torts. This article questions this orthodoxy. Using analytic tort theory, this article hopes to demonstrate that such a view is incorrect. There is no such thing as 'the tort of copyright infringement' or 'the tort of patent infringement.' In reality, IP law is composed of groups of distinct torts that fall under the umbrella terms of copyright infringement and

patent infringement. For example, reproducing a protected work and publicly displaying a protected work are two different copyright-based torts, in precisely the same way as trespass and private nuisance are two separate real property-based torts. Likewise, making and selling a patented invention are two different patent-based torts, just as defamation and false light are two distinct dignitary torts.

The lack of detail in the analytic theory of IP law has produced a serious consequence. In the common law, it is acknowledged that different torts are associated with different liability regimes. For example, proving trespass requires neither proof of harm nor fault; proving nuisance requires proof of harm, but no proof of fault; while proving negligent property damage requires both harm and fault. By contrast, in IP, the tendency to lump various different torts in together results in the adoption of uniform liability regimes across whole ranges of different torts, regardless of whether doing so is necessary for achieving the law's underlying normative goals. By paying closer attention to the law's structure, this article produces a fine-grained analytic theory of IP. In doing so, it not only enables a more nuanced appreciation of the choice of liability regimes at our disposal, but also provides a tort perspective on the traditional "bundle of sticks" metaphor commonly discussed in this area.

- Irina D. Manta (and Robert E. Wagner), IP Infringement as Vandalism

Defenders of strong intellectual property rights often maintain that intellectual property infringement is theft, and that the sanctions associated with it ought to be high. Others are skeptical of the property comparison and think that much lower sanctions are appropriate. We argue that a careful analysis demonstrates: 1) that intellectual property infringement can be analogized to a property crime, but 2) that the more analogous crime is vandalism or trespass rather than theft. This categorization takes the rhetorical punch out of the property comparison.

In addition to analyzing the natures of the various offenses, this Essay investigates the sanction regimes for different property violations and finds that not only are maximum statutory sanctions generally higher for intellectual property infringement than for vandalism and trespass, they are usually also higher than for theft. Bringing intellectual property infringement in line with property offenses, therefore, would actually surprisingly result in a lowering of sanctions.

Copyright

- Jim Gibson, Copyright Incentives in the Courtroom

To what extent does copyright litigation reflect the economic-incentive justification for copyright protection? By examining a random sample of more than three hundred copyright complaints and other docket-level information, this paper explores whether copyright claimants are using their legal entitlements to sue those who threaten their works' revenue stream or otherwise undermine the incentive to create works of authorship.

- Betsy Rosenblatt, IP, Creativity, and a Sense of Belonging

This project identifies and observes an underexplored force in shaping both the motivation to create and the motivation to abide by copying and imitation norms: the desire for a sense of belonging. Several scholars have explored IP's "negative spaces": areas of creation and innovation that thrive in the absence of formal protection. In many of these areas, copying and imitation are governed by informal "IP without IP" norms, and scholars have speculated that creators may adhere to these norms for economic reasons such as network effects and non-economic reasons such as shame and reputation. Few, however, have explored why participants in these low-IP environments choose to create in the first place.

This project hypothesizes that in some low-IP communities, the same factor significantly encourages both creation and adherence to informal copying and imitation norms that differ from formal law. Specifically, in these areas, participants are motivated to create by a desire to "belong" to a particular creative community, and are motivated to comply with norms by that same desire for belonging. It follows logically that these communities would develop and adhere to copying and imitation norms different from those imposed by law not only to meet the particular needs of the creative community, but also as a form of "setting apart"—to distinguish the norms of the community from the more conventional strictures of formal law and reinforce the meaning of "belonging" to those creative communities. This refines the common narrative of formal intellectual property law as a necessary incentive for creation and innovation. Finally, the project explores the normative implications of this refinement.

- Guy Rub, Copyright and Contracts Meet and Conflict

Both copyright law and contract law can regulate certain actions with respect to certain information goods fixed in a tangible medium of expression. However, because contracts can regulate what copyright leaves unregulated and free to exploit, there is tension between the two.

The enforceability of such contracts is typically being discussed under the auspice of copyright preemption doctrine. Two main approaches emerged in the numerous decisions on this topic. The first approach suggests that contracts are never preempted. The competing approach holds that preemption should be found where a contract regulates an activity that is an exclusive right, such as reproduction or distribution. The Article suggests that while both approaches are supported by well-established narratives in copyright law discourse, they are both misguided.

The Article explores several features of copyrighted goods that might, when taken together, make some contracts undesirable from a copyright law policy perspective. The Article concludes that standard-form-agreements that make the copying of an idea or a minor expression illegal, should typically be preempted by the Copyright Act. Most other contracts, including negotiated contracts over ideas, which are quite common, should survive preemption.

- D.R. Jones, Libraries, Contract and Copyright

Section 108 of the Copyright Act provides exceptions for certain library uses of copyrighted materials. Section 108(f)(4) provides, however, that the provisions of Section 108 do not affect “any contractual obligations assumed at any time by the library or archives when it obtained a copy or phonorecord of a work in its collections.” As copyrighted works have become digital, copyright holders have chosen to adopt a business model of licensing rather than selling these works. Through contract, copyright holders have limited or eliminated exceptions for library use of copyrighted works. The Section 108 Study Group, which reviewed Section 108 for possible changes, examined the issues with 108(f)(4) but could reach an agreement on a recommendation.

This paper will revisit the issue of whether copyright holders should be able to use contractual provisions to limit or eliminate exceptions provided for library use under the Copyright Act. The paper will include consideration of new law in the United Kingdom which provides that contracts provisions cannot override many of the acts permitted under copyright law.

- Deming Liu, Time to Rethink Copyright for Education

Rawls’s notion of lack of desert would justify or advocate free copyright, or to a lesser extent, a much relaxed regime than the current copyright regime. However, those who disagree with Rawls’s theory of justice would oppose free copyright or an alternative regime. In delving into the root cause of the disagreement, we examine the view of Rawls on differentiation of talent in developing his theory of justice. We believe that the fundamental cause for the disagreement arises both from Rawls’s unfounded belief in talent being innate and unequal and from his treatment of developed talent. Rawls fails to account for one’s hard work and efforts in developing talent. Rather, he believes without grounds that whether one makes efforts to develop talent and then obtains and uses talent is biologically determined. That belief results in fatalism, undermines justice, and to say the least, would have the debilitating effect. In arguing against Rawls’s treatment of inborn talent and developed talent, we have sympathy with the disagreement and we believe that those who work hard in developing their talent and use the developed talent to produce a good are indeed entitled to the fruit. As far as copyright is concerned, the creator deserves reward for and is entitled to his creation. Given the contribution of others to the creation, what is debatable is the nature and extent of the entitlement. Because it is impossible to allocate a share to each contribution, we propose that copyright should be made free for education to carry forward one’s indebtedness to the past as an obligation to future learners who need free copyright to acquire and develop their talent.

We argue that Nozick, Epstein and others who disagree with Rawls’s notion of lack of dessert or entitlement would agree with Rawls for one thing, that is, copyright should be freely available for education, taking into account the role of education, the nature of creation, and the requirement of intergenerational justice.

Patent—NPEs

- Scott Kominers (& Lauren Cohen), Patent Troll Evidence from Targeted Firms

We provide theoretical and empirical evidence on the evolution and impact of non-practicing entities (NPEs) in the intellectual property space. Heterogeneity in innovation, given a cost of commercialization, results in NPEs that choose to act as “patent trolls” that chase operating firms' innovations even if those innovations are not clearly infringing on the NPEs' patents. We support these predictions using a novel, large dataset of patents targeted by NPEs. We show that NPEs on average target firms that are flush with cash (or have just had large positive cash shocks). Furthermore, NPEs target firm profits arising from exogenous cash shocks unrelated to the allegedly infringing patents. We next show that NPEs target firms irrespective of the closeness of those firms' patents to the NPEs', and that NPEs typically target firms that are busy with other (non-IP related) lawsuits or are likely to settle. Lastly, we show that NPE litigation has a negative real impact on the future innovative activity of targeted firms.

- Michael Burstein, Secondary Markets for Patents: An Evaluation

The last several years have seen the development of a nascent secondary market for patents, in which patents are bought and sold by entities other than the inventors whose work falls within the patent claims. Transactions in this nascent market have taken a variety of forms, ranging from “over the counter” sales of patent portfolios in stand alone transactions or as drivers of M&A activity, to the collateralization of patents as securities in debt offerings, to exchange mediated through entities that purport to serve as “market makers.” Most of the commentary on these developments has focused on the extent to which they have been efficient in matching buyers and sellers of patents, and on how these new markets could perform better through increased transparency, improved notice about the content of patent claims, and better pricing methodologies. But discussions about improving patent markets elide the normative question whether such markets are desirable at all. In this essay, I offer a framework for answering that question. I begin with premise that achieving efficiency in the purchase and sale of patent assets alone cannot be the goal of policy interventions in the patent market. This is neither the goal of the patent system nor of liquid asset markets. The efficacy of any market for patents should be measured by the extent to which it promotes or retards the development and dissemination of new technologies. Patent markets can do this in much the same ways as capital markets. First, they can allocate working capital—here, ideas—to its most efficient users. In this regard, patent markets might facilitate commercialization by allowing inventors, developers, and commercializers to find each other and strike welfare enhancing arrangements for technological development. But there is a difference between markets for technology and markets for patents. Where the fit between the underlying product and the patent is imperfect, strategic behavior may result. Similarly, patent markets might reduce the risk of infringement liability and provide a way to “clear” the market of low-value patents that inevitably issue from the Patent Office. But the welfare benefits of this dynamic could be undermined if liquidity

draws into the system patents that would otherwise rationally go unenforced or by skewing innovative activity toward patentability. I conclude by noting that these effects are likely to be dynamic and context-specific; the normative case for or against patent markets will therefore require empirical research.

- Shawn Miller (& Ted Sichelman), Does Patent Litigation Diminish R&D?

The overall rate of U.S. patent litigation has been growing rapidly over the past twenty years, and recent studies estimate that the economic impact of U.S. patent litigation may now be as large as \$80 billion per year. Because patent litigation is costly, one might expect that it will diminish R & D expenditures, the very activity patents are designed to spur. Indeed, two recent studies find that (1) public firms sued by non-practicing entities (NPEs) and that settled or lost their cases experienced on average over a \$200 million decline in R & D expenditures relative to firms that had their cases dismissed; and (2) that small, publicly traded firms involved in intensive patent litigation experienced a 2.6-4.7% decline in overall R & D following suit. Here, we supplement, extend, and test these studies by performing macroeconomic regressions on the U.S. economy as a whole. Using a time-series, vector autoregression (VAR) model to analyze the impact of patent infringement filings on R & D over the period 1971-2009, our initial results show that until the 1990s patent litigation had a positive effect on economy-wide R & D. However, more recently—roughly over the last twenty years—patent litigation has had a negative effect on overall R & D—roughly, a 1% increase in litigation has conservatively led to a 0.10% decrease in total R & D expenditures. We obtain these estimates after controlling for a host of other macroeconomic and patent-related variables that can influence overall R & D levels. Because patent litigation rates have increased by about 100% over the last twenty years, this roughly correlates to a 10% drop in total U.S. R & D expenditures (or \$40 billion per year) due to increases in patent litigation. Consistent with earlier studies, because these trends began in the 1990s, we suggest that these changes may be due to the rise of licensing-driven suits by practicing entities in the 1990s and even more recently by NPEs.

Patent—Innovation Policy

- Rachel Sachs, Innovation Law and Policy: Preserving the Future of Personalized Medicine

Personalized medicine is often viewed as the future of health care, rightly receiving attention from scientists, policymakers, and legal scholars. Yet scholars' attention too often focuses on only one area of law. And because patent law, FDA regulation, and health law work together to affect incentives for innovation, they must be considered jointly. This Article will examine these systems together in the area of diagnostic methods, an aspect of personalized medicine which has seen recent developments in all three systems. This examination reveals that changes in each system might marginally affect innovation incentives in isolation, but might cause problems considered together. The Article suggests specific legal interventions that can be leveraged to restore an appropriate balance in incentives to innovate in diagnostic methods.

(1) The Federal Circuit and Supreme Court have recently examined the question of divided infringement of method patents, where no single entity has performed all steps of a claim. But neither court has considered the impact of their decisions on method patents in medicine. Further, neither court has recognized the relationship between their divided infringement opinions and their patentable subject matter doctrine: both courts have recently issued decisions requiring claims to include more steps to become patent-eligible. Where new divided infringement precedent suggests that a single actor must perform all claim steps, together these doctrines make it harder to both obtain and assign liability for diagnostic method patents. (2) Simultaneously, the Affordable Care Act (ACA) has accelerated a restructuring of the diagnostics and hospital industries. The ACA encourages increased efficiency in medicine, and as provider systems consolidate, they may jettison portions of their diagnostic services, allowing large diagnostic companies like Quest or LabCorp to become more monolithic. This divides the steps of many diagnostic tests, as the physician may order a test then performed by an external laboratory. These changes in institutional organization may compound the difficulties diagnostic method patent holders face in assigning infringement liability. (3) Finally, the FDA has recently proposed to begin regulating laboratory-developed tests. This new regulatory regime will likely increase the cost of developing new diagnostics, as development will be accompanied by a new, potentially significant, regulatory burden. Particularly since reimbursement for diagnostics has historically been low, not all labs will voluntarily invest in developing such tests, especially if clinical trials are required. As a result, incentives for investment in innovative diagnostics might decrease.

Legal actors have recently pulled levers in all three systems, likely going too far in disincentivizing innovation. Fortunately, each system can also be used to solve the problem. For instance, in patent law, the Supreme Court's recent divided infringement opinion was likely wrong, and perhaps either the Federal Circuit should circumvent it on remand or Congress should reverse it. In FDA regulation, Congress might create a short exclusivity period for newly approved diagnostics. On balance, an exclusivity period is likely the best solution. Companies would still face difficulties in obtaining patents, but those developing diagnostics could more easily recoup their investment.

- Ted Sichelman (& Jonathan Barnett), Revisiting Labor Mobility in Innovation Markets

It is widely asserted that laws that facilitate labor mobility among R&D personnel are conducive to innovation. The primary example for this thesis is Silicon Valley. According to the standard argument, California's refusal to enforce non-compete agreements has promoted employee turnover among technology competitors, which in turn has redounded to the industry's collective benefit by fostering the widespread dissemination of new ideas and technologies. By contrast, Massachusetts' insistence on enforcing non-compete agreements purportedly stunted development by discouraging the spread of ideas within the inventive community. In this paper, we set forth theoretical and empirical arguments that cast doubt on this thesis and offer a novel theory of when and how non-compete agreements promote and hinder innovation.

- Xuan-Thao Nguyen, Financing Innovation: Legal Development of IP as Collateral in Financing

Commentators have repeatedly raised questions about the United States' ability to continue to be an innovative nation. Some complained that compared to other countries with higher rates on innovation, the United States has been falling behind due to lack of funding for research. Small businesses, known for being incubators of new ideas and job creation, continue to face major obstacles in obtaining funding from government and financing from lenders. While lenders are willing to make credits available for large businesses, they ignore small businesses. The dire financing situation faced by small businesses today is not much different from the credit squeeze during and after the epic financial crisis in 2009. Without funding from both public and private sectors, small businesses cannot operate their companies, innovate for new ideas, and foster employment growth. The United States will soon lose its edge in innovation. How can financing be made available for small businesses that most often own neither real property nor tangible assets?

Small businesses have ideas, trademarks, content, know-hows, and other intangible assets. These intangible properties can be used as collateral for small businesses to obtain financing from the private sector. Obviously, lenders must be willing to accept this type of property as collateral in order for credits to be extended to small businesses. Creditors must overcome their reluctance in these commercial transactions. This Article argues lenders should take great comfort in making loans to small businesses with intellectual property assets serving as collateral. The United States has a long legal history of paving the path for financing innovation, as seen through the development of decisional law spanning from 1845 to the present. The established history of lending with intellectual property collateral is uniquely American. Recourses and remedies under strong rules of law system are readily available for secured lenders and creditors who are willing to finance innovation.

*The Article will proceed as follows. Section I will trace the development of embracing patents, copyrights and trademarks in chattel mortgages. This Section will analyze early cases, including the seminal case, *Waterman v. Mackenzie* in patent mortgages, and their significance in recognizing the incorporeal property and the right of the mortgagee. In addition, Section I will focus on the development in copyright statutes in relation to the use of copyrights in mortgages. Most importantly, the arrival of new technologies necessitates the increase of financing for the creation and distribution of copyrighted content and new legal development in the area of foreclosure of copyright mortgages. Section I will also examine whether trademarks were used in chattel mortgages during the similar period of patent and copyright mortgages. Due to the nature of trademarks and stricter view of trademarks and their attached goodwill, trademark mortgages faced certain limitations. Recognizing the limitations in trademark mortgages, this Section compares statutorily how patent, copyright and trademark provisions differ in their recording requirements for mortgages.*

Section II will move to the post-war period of robust economic growth and commercial law reform nationwide. The adoption of Article 9 of the Uniform Commercial Code marks a new modern era of creating uniform law for states to encourage financing based on personal property as the backbone of economic growth. Paralleling the development in uniform commercial law, historic milestones in intellectual property law are seen through the overhauls in trademark law, patent law, and copyright law that brought intellectual property law to modern time. Section II will trace the intersection of Article 9 of the Uniform Commercial Code and intellectual property law. This intersection would lead to new approaches to patent collateral, copyright collateral, and trademark collateral. Particularly, the old mortgages were replaced with new understanding and practices of security interest in modern secured transactions. In addition, challenging issues relating to whether federal or state law will govern perfection of intellectual property must be resolved in order for financing based on intellectual property to be flourished.

Section III will look beyond financing based on intellectual property in the private sector. This Section will examine U.S. government's role in financing small businesses with intellectual property assets. The U.S. Small Business Administration has a history of extending loans to small businesses and accepting intellectual property as security for the repayment of loans. This Section will analyze decisional law for a comprehensive understanding of both the practice and legal development of government's financing for innovation from small businesses.

Section IV will shift to contemporary issues arise in financing innovation today. Specifically, this Section will dissect the recourse and remedies available to secured creditors in financing innovation when the borrower could not fulfil payment obligations. This Section will analyze recent Federal Circuit's decision on whether secured party of intellectual property collateral becomes owner of the intellectual property by operation of law in post default. Clearly, predictability as to ownership of intellectual property collateral in post default will enhance financing of innovation.

There are some risks associated with financing innovation. Section V will identify and assess the risks. Notably, whether a grant of security interest in some circumstances be deemed as fraudulent transfer and whether the secured creditor is liable for infringement are the risks that have emerged in financing innovation. The risks, however, are rare in financing innovation by the private sector.

Learning from the development of financing innovation from 1845 to the present, Section VI will offer some observations and discuss implications for future financing of innovation. There is a need for both traditional and online lenders to appreciate the intellectual property assets held by small businesses. The intellectual property assets should be included in the analytics in assessing the overall health of a business seeking a loan or a line of credit for its new innovative product, idea or vision. The Article ends with a brief conclusion that in order to maintain the United States' innovative edge, attention to access to financing by small businesses must be at the center of the discussion and intellectual property must be recognized as part of the center.

- Sarah Burstein, *The High Cost of Cheap Design Rights*

The U.S. design patent system has been repeatedly criticized for being “too expensive.” Critics argue that the United States should adopt a system in which design rights are cheap or free to obtain, like the European Community Design regime. Even the U.S. Patent & Trademark Office appears to assume that design patents should be as cheap as possible, cheering the United State’s progress towards joining the Hague System for the International Registration of Industrial Designs. This paper questions the commonly-accepted proposition that design rights should be as inexpensive as possible; these “cheap” rights impose significant costs on competitors, judicial systems, and society as a whole. Many of these costs spring from the fact that someone must pay to search the prior art and determine if a claimed design right is valid. In the United States design patent regime, the requirement of PTO examination effectively forces the claimant to bear those search costs as a prerequisite to protection. In “cheap” systems, like Europe, those costs are externalized to competitors and, ultimately, to society. Viewed in this manner, forcing claimants—who, after all, are the ones seeking to change the free-copying status quo—to bear the requisite search costs is neither unfair nor inefficient. At a minimum, these external costs should be recognized and discussed in evaluating the merits of particular design-protection regimes.

Trademark

- Glynn Lunney, *Inefficient Trademark Law*

Since at least 1973, law and economics scholars have argued that the common law development of legal doctrine in courts is more likely to lead to efficient rules than the interest-group driven politics of the legislature. In trademark law, the exact opposite has occurred. The legislature gave us a reasonably efficient statute in the Trademark Act of 1946, but then courts re-interpreted it into an inefficient and sometimes incoherent morass. This article explores why. I argue that a collective action problem has caused this inefficient evolution. Trademark owners, as plaintiffs, largely capture and thus internalize the benefits of broader trademark protection. Trademark owners are therefore willing to pay for litigation that has a chance to change legal doctrine in ways that will lead to broader trademark protection. In contrast, trademark defendants do not usually capture the full benefits of narrowing trademark protection. Rather than benefit trademark defendants, either individually or collectively, narrowing trademark protection primarily benefits consumers by creating more competitive markets. While more competitive markets are generally desirable, their benefits are largely external to any given trademark defendant. For that reason, trademark defendants systematically lack sufficient incentive to challenge, through litigation, questionable and overbroad trademark doctrine. The net result has been a common law evolutionary process biased, at least as a general matter, towards ever broader trademark protection.

- Peter J. Karol, An Exclusive Right to Judicial Discretion: Learning from eBay's Muddled Extension to Trademark Law

This early-stage article will address the current debate over whether to extend, to trademark law, the rule in eBay v. MercExchange denying prevailing patent plaintiffs presumptive entitlement to injunctive relief. It focuses, however, not on whether eBay should apply to trademark law, but rather on how the debate exposes an inherent incongruity undermining foundational provisions of the Lanham Act. Namely, the Act purports to grant ex ante exclusive rights to mark owners against all confusingly similar uses, but then reserves discretion to district courts to deny statutory injunctive relief even where plaintiff has demonstrated likely harm to its exclusive rights. This discrepancy is further compounded by the difficulty of attaining monetary relief in non-willful cases of trademark infringement under the Act. In short, as currently interpreted, the statute creates a right without any presumptive remedy. The article will start by first analyzing the debate over eBay's place in trademark law, revealing the trouble this issue has posed for federal courts and commentators alike. The decisions reveal deep conflicts at the appellate level, and widespread confusion among the district courts. Commentators, though more consistent in their general rejection of eBay as sensible precedent for traditional trademark infringement claims, mostly fail to address the statutory arguments advanced by the courts (i.e., that the Patent Act and the Lanham Act use nearly identical language to give injunctive discretion to federal courts). For its part, the otherwise robust property-versus-liability rules literature tends to avoid direct confrontation with the curious case of trademarks. Next, the article will seek to locate the source of this difficulty and conflict. It cannot be explained away, as with eBay in the patent space, as a difference of opinion on when infringement also causes harm. That is because proof of harm is an element of a claim for trademark infringement (in the form of a demonstration of likely confusion) but not for patent infringement. Rather, it appears rooted more in a duality in the Lanham Act itself. Namely, the Act purports to create a strong form of exclusive right in registered marks. Yet it then gives apparently complete discretion to courts to deny injunctive relief even where plaintiff has demonstrated infringement of this exclusive right and shown likely continuing harm (to itself and the public). Under modern interpretations, moreover, the Act denies monetary relief in most non-willful trademark infringement cases. We are thus left with a structure that, by design, seems to create an exclusive right lacking a clear remedy. The article will then turn to the drafting history of the Lanham Act in an attempt to understand the rationale for such seemingly dissonant notions. It will argue that neither Congress nor the drafters of the Act provided any coherent basis for granting a strong form of national, exclusive rights to trademark owners while denying any presumptive right to relief. Instead, this incongruity was most likely a product of the Act's long, haphazard drafting history, coupled with unresolved conflicts regarding the basic theory of the legislation. Specifically, rather than provide a logical and consistent explanation for how a regime of national trademark registration can coexist with geographically limited, state-created common law trademark rights, the Act buried the controversy (and placated opposition) by retaining complete ex post judicial discretion to enforce the supposedly ex ante "exclusive" right. Under this view, contemporary confusion over eBay signals a reemergence of this long-dormant, but essential, conflict over the basic purpose and structure of the federal trademark registration scheme.

- Xiyin Tang, *The Case for Genericide Defenses in Artistic Works* (<http://ssrn.com/abstract=2551268>)

In recent years, even those outside the legal community have come to know the two-word phrase "fair use." It's become a nouvelle vogue topic of sorts, the darling child of transformativeness and critical commentary meant to save the draconian and nonetheless-still-expanding intellectual property laws from overreach. Yet fair use is riddled with problems, as we all know: it's a defense, not an affirmative right; there are no bright-line rules; it's case-by-case; it's notoriously unpredictable. Yet everything from rap songs to chewy dog toys have been saved by fair use. In recent years, what I like to call the "postmodern problem" has highlighted yet another glaring inadequacy of the fair use doctrine: its focus on parodies, in which the copyrighted work itself is targeted, to the detriment of everything else (pastiche, appropriation, collage). And yet the postmodern condition suggests that it is precisely the inability of a work to be unique enough TO parody that makes those other forms of appropriation so urgent today.

Yet there is a lesser-mentioned safeguard against intellectual property overreach that taps precisely into those ideas of the banal and the universal. It is genericide, and it is the bastard child of all defenses, relegated to the backseat of trademark law in a world in which fair use reigns. But genericide does everything fair use does not do: it expropriates a trademark into the public domain, thus diminishing the costs of infringement litigation; it recognizes the right of the public, NOT the trademark owner, to decide a mark's fate. It is audience-friendly and First Amendment-approved. So why don't we talk about it enough? This Article makes a plea for increasing the use of genericide or genericness defenses in expressive use cases. It argues that rather than focusing on arguments of transformativeness in the hopes of winning a fair use defense, artists should emphasize that they did NOT use the work as a means of targeting the work itself—that is—anti-transformativeness. The more we do so, the more "fair" other types of art (of which there are many) begin to seem.

Copyright

- Amanda Reid, *Notice of Continuing Interest in a Copyrighted Work*

The orphan works problem chills. It chills business and commerce by impeding the ability to use and license works. And it also chills speech. Yet other IP doctrines do not face these problems. The patent system has maintenance fees and the federal trademark schema requires a declaration of use and continuing interest. Requiring an analogous filing of continuing interest in a copyrighted work would help ameliorate the orphan works problem and the resulting chilling effect and deadweight loss. Many works were not renewed when copyright renewals were required. And the economic viability of most works does not last as long as current copyright protection. Thus there is a doctrinal justification to harmonize copyright with the other IP doctrines and to require a public notice and claiming of an interest in the work. And there is an economic justification for weeding out the copyright thicket.

- Chris Hubbles, No Country for Old Audio

In the United States, audio recording copyright has inadvertently become extreme in duration and scope. Due to quirks in copyright law development, there are essentially no sound recordings in the public domain; their copyright term is longer than that of any other intellectual object. Yet many audio carriers are particularly fragile and subject to physical deterioration, and are at risk of degrading sooner than the expiration of their copyright term. Most theoretical defenses of copyright assume that creative works subsist indefinitely as ideal objects, without any upkeep. In fact, all intellectual works are subject to physical degradation, and philosophies of intellectual property which do not take this into account may lend support to policies that pose existential threats to the works they are nominally intended to protect. This presentation takes audio recordings as a case study demonstrating that maintenance and preservation concerns ought to be important limiters to intellectual property rights claims.

- Zvi Rosen, Paradoxes and Lessons of State Law Protection for Sound Recordings

The complex situation regarding legal protections for sound recordings made before 1972 has been in the news, both regarding recent litigation and regarding the push to federalize all sound recording copyrights. Following on surveys done by myself and others regarding the current state of protection for sound recordings, this piece will explore how protection for sound recordings under state law is not a rough equivalent of federal copyright law, but is rather both broader and narrower in the scope of protection and remedies it offers. This piece will offer a reappraisal of the importance of statutory damages to rightholders and also offer solutions to the current controversy regarding whether a public performance right for sound recordings exists under state law.

Patent Institutions / Policymaking

- Camilla Hrdy, Patent Nationally, Innovate Locally

This article makes a novel argument regarding the institutional structure of U.S. patent law from the perspective of optimal government size. It argues the Internalization Principle—which states that the jurisdiction that internalizes the external costs and benefits of an activity should be responsible for its promotion or regulation (Oates 1972, Cooter 2000)—applies to U.S. patent law. The patent system is bifurcated in the way it promotes innovation. Inventions—the technical information that can be codified in patent documents and costlessly transmitted to others (Arrow 1962)—produce national and global externalities. Only a government with a broad jurisdiction and a long time horizon has the ability and incentive to effectively protect this information in interstate markets and coordinate public disclosures. This is the role of the federal government pursuant to the IP Clause, which gives Congress power “to promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.”

However, innovations—the functional versions of inventions that are ultimately put into practice and sold in markets (Schumpeter 1911)—produce many local externalities. The local benefits of innovation include immediate benefits like tax revenues and hiring of local workers, and longer-lasting benefits that result when innovators locate in proximity to one another, called agglomeration benefits. These include access to specialized suppliers, larger pools of skilled labor, and face-to-face information exchange. (Krugman 1991). Indeed, much of the information required to practice inventions can only be exchanged in proximity. (Polyani 1966, Von Hippel 1994, Lee 2012). Thus, proximity is theorized to enhance the ability of innovators to exchange ideas and increase the pace of innovation. (Feldman 1994). Meanwhile, costs of agglomeration include crowding, pollution, and safety concerns, especially when new or recently developed technology is involved. I argue that promoting or constraining these localized externalities is the role of smaller-than-federal units of government: states, regions, and metropolitan areas (SRMA), depending on which government size internalizes the externalities. SRMA are likely to be more responsive to local conditions and to the needs and preferences of their constituencies, especially when they are disciplined by competition for mobile residents. (Tiebout 1956.) One of the most important implications of this is that SRMA do not have a bias against “commercial science” and are eager to partner with industry. In addition, SRMA can serve as “laboratories” in which to experiment with diverse innovation policies and from which other SRMA can learn. (Ouellette 2014.)

In this article I demonstrate this bifurcation at a descriptive level. The federal government provides significant incentives to promote the generation and disclosure of new technical information. These include patents and funding for basic research. But outside national mission areas such as defense, the federal government provides few incentives to practice and commercialize inventions. In contrast, SRMA are far more

engaged in fostering practice and commercialization in order to capture the benefits for local residents. They do so through location incentives and financial awards for private firms (Hrdy forthcoming 2015), and by engaging with universities, which are seen as the anchor for growing a lasting innovation economy within a region. (Porter 1998.) On the flip side, SRMA are also engaged in regulating unfamiliar innovative activity that potentially produces external harms to local residents, such as fracking, automated cars, or drones. (Kaminski 2013.) This follows the Internalization Principle: the government that internalizes the externalities has the best incentives and ability to act.

The article recognizes the limits of decentralized governance due to the presence of inevitable externalities, disuniformity, lack of coordination, and perverse incentives resulting from competition for scarce resources. (Enrich 1996.) It fully supports a strong federal role in cases of “collective action failure.” (Cooter & Siegel 2010.) However, shifting to the normative, the article argues that the bifurcation of patent law represents an efficient allocation of institutional resources to very different functions. The federal government’s role should be to increase the potential size of the reward from invention, promote disclosure of technical information, and facilitate diffusion of innovation among jurisdictions. Meanwhile, the role of SRMA should be to facilitate commercialization of inventions in a particular location with attention to the needs of the region. The article also points out some areas where the bifurcation is not followed. These include U.S. patents that seek to do more than promote the generation, disclosure, and transfer of technical information, (Kitch 1977), and some university-industry technology transfer practices. For example, when universities adopt commercialization strategies such as patent licensing without involvement from local governments in which the university is located, such activities may not be sufficiently directed at generating innovative activity in the region.

- Cynthia Ho, Drug Rehab: How Cognitive Biases can Improve Drug Development

This proposed article aims to examine how cognitive biases of the FDA and Congress impact drug development, as well as suggest how a better understanding of these biases may improve solutions to drug development. In particular, this article is evaluating non-patent methods of promoting innovation, including but not limited to other areas of exclusivity, such as data exclusivity, pediatric exclusivity, and orphan drug act exclusivity. In recent years, Congress has enacted more exclusivities for drug companies through regulatory, rather than patent laws. This article evaluates whether there are cognitive biases at work that result in these laws, as well as whether those biases could be better understood to promote better solutions for drug innovation.

This is an important issue since not only is the number of new drugs modest compared to expenditures, but also because these regulatory exclusivities may be unduly embraced simply because patents have been increasingly subject to criticism. This article thus aims to provide further insight and understanding to better promote innovation in a more tailored manner than the “one size fits all” patent standard that is well acknowledged to result to mostly promoting the most commercially successful, but not necessarily the most socially necessary drugs.

- Megan La Belle, Public Enforcement of Patent Law

Law enforcement in the modern regulatory state is largely a joint enterprise. In areas such as securities, antitrust, civil rights, and environmental law, enforcement responsibilities are allocated between public and private actors. Patent law, on the other hand, is enforced almost exclusively through private lawsuits. Considering patent law's constitutionally-mandated public purpose—"to promote the Progress of Science and useful Arts"—this privatization of patent enforcement is troubling.

In recent years, there has been some movement away from this purely private enforcement regime for patent law. The Department of Justice and Federal Trade Commission, for example, have involved themselves in certain patent matters that implicate antitrust law. While heading in the right direction, these regulators alone cannot adequately enforce patent law due to their limited jurisdiction, resources, and expertise.

*This Article thus proposes a more robust public enforcement mechanism for patent law. It argues that Congress should arm the U.S. Patent and Trademark Office (PTO), the agency responsible for reviewing patents *ex ante*, with broad powers to police patent validity *ex post*. The PTO is best situated to lead this effort because of the agency's expertise, institutional resources, and enhanced powers under the America Invents Act. Moreover, charging the PTO with the responsibility for policing patents should serve to dispel allegations of agency capture and institutional bias toward patent owners.*

- Josh Sarnoff (& Alan Marco), Is Refiling Practice Doing What It Ought To? I Can Name That Invention in X Words

Numerous critiques have been leveled against "refiling" practice – i.e., the ability of applicants to continue to prosecute the same or related claims in the same or new applications after an initial final rejection of claims in a predecessor application. These critiques suggest that refiling applicants use the legally permitted multiple opportunities to wear down patent examiners so as to obtain the grant of claims that should never have issued. New data analyses of independent claims from patent publications and patent grants suggest that the story is much more complex. Refiling practice permits applicants to obtain claims of increasingly narrow scope when reexamined, either through requests for continued examination (RCEs) or for each round of continuing applications filed. RCEs tend to reduce scope more, while continuing applications tend to reduce the number of independent claims granted more (while still reducing their scope). Thus, the data suggest that refiling practice is doing what it should – permitting applicants to continue to pay for examination of applications on sufficiently valuable inventions, so as to obtain patents claims of appropriate scope.

Biotech

- Kevin Collins, Justifying Patent Ineligibility: Regulation-Resistant Technologies

Over the last five years, the Supreme Court has issued an unprecedented four opinions restricting the reach of patent-eligible subject matter. Patent scholars have been highly critical of these opinions on utilitarian grounds. These critics assume that patent law already has a robust set of non-eligibility doctrines—novelty, nonobviousness, enablement, utility and the like—that regulate what constitutes a permissible patent and that are capable of identifying and invalidating most, if not all, costly patents on a fine-grained basis. Taking the efficacy of these non-eligibility doctrines as a baseline, they argue that the marginal impact of the Supreme Court’s patent-eligibility rules will be the invalidation of patents that are, on balance, socially beneficial.

This Article advances the ongoing debate over the utilitarian justification of the Supreme Court’s patent-eligibility opinions by articulating a novel justification for restrictions on patent eligibility. The intrinsic nature of some technologies is different in a way that renders them resistant to regulation by the non-eligibility doctrines. Regulation resistance turns the common criticism of restrictions on patent eligibility on its head. When patents claim regulation-resistant technologies, the non-eligibility doctrines cannot do the cost-reducing work that we expect them to do, and restrictions on patent eligibility offer a viable tool for doing the needed cost-reducing work.

*In addition to introducing regulation resistance as a justification for restrictions on patent eligibility, this Article also offers proof of concept. It employs the theory of regulation resistance to interpret two of the Supreme Court’s recent opinions that restrict patent eligibility and justify them on utilitarian grounds. In *Alice v. CLS Bank*, the Court restricted the patent eligibility of computer software, and, in *Mayo v. Prometheus*, the Court held diagnostic inferences to be patent ineligible. Software is an unusual technology because it can only be claimed using functional language, and diagnostic inferences are unusual because they traffic in concepts rather than categories. These unusual qualities render both software and diagnostic-inference patents resistant to regulation by some the non-eligibility doctrines and justify restrictions on their patent eligibility.*

- Yaniv Heled, Five Years to the Biologics Price Competition and Innovation Act

In March 2010, President Obama signed into law the Patient Protection and Affordable Care Act (PPACA). In addition to “Obamacare,” however, PPACA also included numerous other statutory amendments, one of which being the Biologics Price Competition and Innovation Act (BPCIA). Representing the culmination of a long and fervent legislative struggle, BPCIA set up a framework for the approval of follow-on versions of biological pharmaceuticals (a.k.a. biologics), including periods of market, data, and generic exclusivities in such products, as well as an elaborate scheme for the resolution of related patent disputes. And yet, despite the fact that BPCIA was passed in early 2010, it was only in July 2014 that the FDA accepted the first application for the approval of a follow-on biological product; it was also around that same time that the

first litigation involving a patent dispute arising under BPCIA was filed. This article will examine the reasons for this apparent delay in the implementation of BPCIA and, comparing the track record of BPCIA's implementation to that of the Hatch-Waxman Act, try to assess whether earlier predictions regarding the expected failure of the BPCIA framework were justified.

- Nicholson Price (& Arti Rai), Biosimilars and Manufacturing Trade Secrets

The rapidly increasing role of biologics in the national health care budget created the political pressure necessary to implement a "generic" pathway. The extent to which this pathway will actually succeed in reducing costs is unclear, however. Processes for making biologics are notoriously complex, and an enormous literature testifies to the costs that firms aiming to make biosimilars will face. What this literature generally ignores is the reality that the information to make biosimilars (or perhaps even the holy grail of "interchangeables") does of course exist -with the firms that have made the pioneer biologics. To some extent, because of regulatory filings, the FDA also has this information. The obvious challenge is how to make at least some of this information publicly accessible without damaging innovation incentives. Perhaps enablement requirements for biologics patents should be applied more strictly. Indeed, using existing but underutilized statutory authority, the PTO could ask FDA experts to assist in making enablement determinations. Because pioneer biologics firms have 12 years of regulatory exclusivity, however, such a move may cause pioneer firms to avoid patents altogether and rely even more heavily on trade secrecy. Alternatively, regulators could use the carrot rather than the stick, offering additional rewards to those who disclose trade secret information. Information release through carrots and sticks could feed into nascent public efforts to create a general purpose knowledge base for biologics manufacture. From a broader theoretical standpoint, the role of trade secrecy in biologics manufacturing illuminates not only how firms make choice between patents and trade secrecy but also debates regarding the disclosure function of patents and the complex intersection between patents, trade secrecy, and the regulatory state.

- Liza Vertinsky, The State as Pharmaceutical Entrepreneur

An increasing divergence between private sector efforts and public health needs has prompted a growth in public-private partnership strategies to improve pharmaceutical innovation outcomes. Government actors such as the NIH and the FDA are relying heavily on public-private partnerships, contractual arrangements that involve a sharing of risk, cost and control, to accelerate the pursuit of cures for complex diseases in areas where private sector efforts have proven to be inadequate. This paper examines this changing role of the government in processes of pharmaceutical innovation, with government actors acting increasingly as entrepreneurial partners in the development of drugs for disease areas with potentially lucrative commercial markets and large public health burdens. I consider whether and how the legal framework governing traditional modes of government funding and involvement in drug discovery and development should be adjusted to reflect this expanded government role.

To anchor my analysis I focus on public-private partnership strategies to accelerate the pursuit of a cure for Alzheimer's disease and other major market complex diseases. I examine the ways in which the existing legal framework, particularly rules impacting federally funded inventions, technology transfer, and the ownership and disclosure of information and inventions, impacts these partnership strategies. I suggest that the existing legal framework is based on an outdated model of technology transfer and commercialization that ignores and sometimes inhibits the role of government as indispensable co-entrepreneur. It does not reflect the reduced need to rely on purely private market incentive schemes and the greater need for laws that foster greater sharing of both knowledge and rewards. It does not provide for adequate benefit sharing between public and private parties, particularly where the public sector is bearing a large part of the risk and cost involved in the project. I suggest that the existing legal framework runs the risk of stifling the government's role as innovator by trying to funnel government initiatives into traditional pathways of technology transfer. I identify areas where change in the legal framework is needed to reflect the broader government role in drug discovery and development activities. I then undertake a comparative analysis of alternative interventions, such as adjustments in the rules and requirements attaching to federally funded research and development activities, a recalibration of intellectual property rights in contexts of public-private partnership, and profit sharing arrangements for drugs that are produced with the help of the government.

Trademark

- Leah Chan Grinvald, Contracting Trademark Fame

Fame is the gold standard in trademark law, which enables a trademark holder to control almost anything that third parties and the public do with their trademark. In addition, having a "famous" mark could allow some trademark holders make an end-run around the international trademark registration system. However, fame is extremely hard to prove and requires evidence that large numbers of the consuming public recognize the trademark. Some large trademark holders, such as Facebook, are turning to website terms of use to potentially bolster claims of consumer recognition. For example, Facebook's terms of use has a clause whereby end users recognize Facebook's rights to "face" and "book" as trademarks. This argument is plausible because in contract law, these website terms of use are generally considered valid contracts based on a theory of constructive consent. Given the large number of users of some of these websites (Facebook has over 1 billion worldwide users), if constructive consent were applied in the trademark recognition realm, it would seem to be an easy argument that "Face" and "Book" are separately famous trademarks. As such, these large trademark holders would be given virtually limitless control over all other terms incorporating these words, such as Teachbook. In this article, I question whether this is a normatively positive development. Concluding that this development should not be encouraged, I offer some suggestions to proactively avoid the application of constructive consent to the trademark realm.

- William McGeeveran, What Campbell Can (and Can't) Teach Trademark Law

This paper, which will be presented at a University of Washington symposium celebrating the 20th anniversary of the Supreme Court's Campbell v. Acuff-Rose Music decision, considers what lessons that copyright case can teach about the treatment of parody in trademark law. It also assesses the landscape of trademark parody doctrine today and suggests paths for improvement in the future. The core lessons of Campbell—that parody is socially valuable but that it cannot be protected effectively with bright-line rules—have been useful in trademark as well as copyright law. A third lesson from Campbell is more cautionary; the case draws explicitly on the particular function of copyrights, which limits its applicability to trademarks' very different purposes.

That said, after Campbell—and in part thanks to Campbell—the handling of parody in trademark cases improved continuously, so that today it is quite difficult to find outlier cases where courts fail to appreciate and protect legitimate parody. The Article demonstrates that it's simply wrong now to claim, as some commentators still do, that trademark parody adjudication is a serious problem. This persistent mischaracterization has two pernicious effects: it distracts from what we should be doing to further improve the law of trademark parodies and it contributes to the false narrative that some markholders promote in overly broad demand letters. All of us should stop tinkering with trademark's parody rules to perfect their accuracy. Instead, reform ought to focus on the real remaining problem: administrative costs of adjudication, which give leverage to markholders making overly broad demands. Drawing on my past work, I suggest that most trademark parodies are best handled with a series of defensive doctrines aimed more broadly at expressive uses.

- David Welkowitz, Willfulness (<http://www.law.whittier.edu/WelkowitzArticle>)

Although “willfulness” or “willful” conduct is not normally an element of a trademark infringement claim (with some exceptions), willfulness often plays an important role in the outcome of trademark cases. In counterfeiting and dilution claims, the existence or non-existence of willfulness determines the nature of the available remedy. A court's willingness to award attorney's fees under the “exceptional cases” provision of the Lanham Act may be heavily influenced by “willful” behavior. Even though infringement does not require any sort of fault or intent, “bad faith,” which may include behavior labeled “willful” by courts often plays a significant role in the outcome. And contributory liability may turn on a level of fault that could be called willful (or “willful blindness”). Unfortunately, neither courts nor statutes have consistently defined what “willfulness” means, and some statutory uses (especially in the trademark dilution statute) further obscure the meaning of the term. Does “willful” mean “intentional”? If so, intent to do what? (In this regard, the “willful intent” provision of the federal dilution statute would be particularly obtuse.) Does “willful” mean “with knowledge”? If so, knowledge of what? That one's action is infringing? Or something else? Many courts have stated that “willful blindness” may be the equivalent of intentional conduct, without adequately defining what willful blindness means.

Focusing primarily on trademark law, this article examines the many uses of willfulness in trademark law, including some uses of willful or intentional action in determining infringement. The article examines both case law and jury instructions (as well as secondary sources and studies) to illustrate the inconsistencies and linguistic problems with the term, drawing some comparisons with other areas of intellectual property law and areas of law outside of IP. The article also discusses the implications of recent Supreme Court discussions of willfulness (in the Safeco decision concerning the Fair Credit Reporting Act, and the Global-Tech decision concerning secondary liability for patent infringement) for the interpretation of that term in trademark law. The article will further discuss some implications of the lack of any clear definition of willfulness for trademark law, particularly the specter of ever-increasing damage awards (and perhaps even liability) for conduct that is best characterized as “ordinary” infringement, rather than extraordinary.

Copyright

- James Grimmelman, Copyright for Literate Robots

Almost by accident, copyright doctrine has concluded that copyright law is for humans only: reading performed by computers doesn't count for infringement purposes. Conceptually, this makes sense: copyright's ideal of romantic authorship involves humans writing for other humans. But in an age when more and more manipulation of copyrighted works is carried out by automated processes, this split between human reading (infringement) and robotic reading (exempt) has odd consequences and creates its own tendencies toward a copyright system in which humans occupy a surprisingly peripheral place. This essay describes the shifts in fair use law that brought us here and reflects on the role of robots in copyright's cosmology.

- Kate Klonick, Comparing Apples to Applejacks: Cognitive Science Concepts of Similarity Judgment

It seems quintessentially American that in the year of the United States bicentennial, one maker of a plastic toy Uncle Sam mechanical bank sued another to invalidate a copyright. In determining the validity of the appellant's copyright, the court compared the plastic bank to a similar cast-iron Uncle Sam bank that had existed in the public domain since the 1880s. The appellant claimed a myriad of differences between his copyrighted bank and that of the original, including a change in the material the bank was made out of, the shape of the carpetbag Uncle Sam was holding, a shortened figure and narrowed base, a change in the texture of many of the bank's elements, the addition of leaves instead of arrows in the talons of an eagle on the bank and alterations to Uncle Sam's face, hairline, hat, dress, shirt collar and bow tie. While noting that the long list of changes made the plastic bank more than a "faithful reproduction," the court found the alterations to be "merely trivial" and invalidated the copyright for lack of originality. But if the plastic bank was not a simple reproduction, and not sufficiently original, what was it? What changes, if not to size, substance, texture, art, and shape, could the maker possibly have made that would have distinguished it sufficiently from its source material?

The questions generated by this landmark case highlight how, perhaps more than any other area of law, copyright law is grounded in the subjectivities of human perception. This is especially true in regard to derivative works, where courts and legislatures have long struggled to create laws and tests that outline qualities and categories for determining similarity between original and derivative material. But the question of how to create reliable strictures to judge something as subjective as similarity is not unique to copyright law. At a more theoretical level, cognitive scientists have struggled with the same questions for decades, creating various scientific and theoretical models to explain how humans prioritize, categorize and judge features to determine similarity between two or more objects.

This article will first look at copyright's derivative works right and the factor of transformation under the fair use test, examining historical issues in both statute and relevant case law. A brief history and summary of cognitive science and psychology's ideas about human perception of generalization, similarity and categorization will be reviewed in Parts I and II. Part III will then compare the cognitive science findings on how people assess similarity to the similarity tests used by the courts. Further, it will propose that cognitive science reveals that the courts are highly susceptible to a number of potential biases and framing heuristics in their tests for judging infringement, derivative works and fair use. Using these lessons and analysis, this article will suggest possible improvements to judicial frameworks, and future applications for cognitive science in copyright law, and in the meantime, ways in which both plaintiffs' and defendants' copyright attorneys might use such biases to their advantage.

- Peter Yu, *The Copy in Copyright*

This article articulates the need for a right to parody in copyright law. It draws on the recent reforms to introduce fair dealing exceptions for parody and satire in Australia, Canada, Hong Kong, Ireland and the United Kingdom as well as the much longer experience with parody as fair use in the United States. The article also advances justifications for the right to parody, based on copyright theory, economic benefits and human rights obligations. The article concludes that a right to parody, while important, is insufficient to accommodate the needs and interests of internet users. Instead, it calls for additional exceptions to accommodate the production of predominantly non-commercial user-generated content.

- Andres Sawicki, *Law and Informal Rules of Creative Collaboration*

The consensus today is that alongside traditional creative industries like film or literature, there are IP negative spaces—fields in which despite the doctrinal or practical absence of formal copyright law, artists produce expressive works because social norms have developed to protect them from freeriding. In this Article, we emphasize a different locus for the influence of informal rules: the organization of creative production. While previous work has explained that informal rules can preserve incentives to create expressive work at copyright's periphery, we argue that informal rules regulate creative activity at the very center of the copyright industries by shaping the organization of collaborative work. Informal rules cover everything from how producers and directors

decide when a film is finished to how musicians choose bandmates. In this way, informal rules operate in the core copyright industries—film, theater, music, television—previously thought to be dominated by formal copyright law. Moreover, formal copyright law interacts in complex ways with these informal rules of creative collaboration, thereby jointly influencing the organization of our cultural production. Crucially, this influence extends not only to the quantity of cultural production (as classic copyright and incentives theory would have it), but also to the content of cultural production.