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This fine collection features a roster of excellent scholars in and out of law schools. Many of the pieces are edited and de-footnoted versions of work available elsewhere, whose value here comes from aggregation and contrast. The remixing is thematically appropriate given the topics and commitments of most participants. The majority of the papers grew out of a Society for Critical Exchange conference, “Con/texts of Invention: Creative Production in Legal and Cultural Perspective,” in 2006 (p.vii).

Insightfully, the editors point out that much criticism of current IP regimes comes from scholars who are dissatisfied with IP’s institutions, rather than with its normative commitments to capitalism, ownership, and creativity (p.6). But the claim that current IP law is bad for innovation assumes the neutrality of the idea of “innovation,” and invites further investigation. This collection does so with interdisciplinarity in its DNA—not just because law needs the insights from other disciplines, though it does, but also because of the way that IP has affected how other academic disciplines constitute and regulate themselves, from copyright permissions to materials licensing by scientific researchers (p.10).

The book is divided into five general areas. The first is High and Low: IP Practices and Materialities, which turns out to be about the history of patents. Mario Biagioli’s “Patent Specification and Political Representation: How Patents Became Rights” argues that patents shifted from monopoly grants designed to promote technological transfer to documents that described inventions in sufficient detail to enable third
parties to practice them as part of a political shift (p.25). He suggests that representative democracy created the conditions under which a patent “bargain” between inventors and citizens was possible, focusing on disclosure to the public via the specification. A key consequence of this new idea of what a patent should be was the requirement of true invention, replacing the past practice of allowing patents to be granted based on copying from some other jurisdiction.

The specification and the focus on mental invention in turn made it plausible to grant rights to all embodiments covered by the specifications, thus altering the patent from a right to a particular machine to a right to the immaterial essence of the invention. Utility and reduction to practice took a back seat as the patent became a text, rather than a technology transfer tool. Biagioli’s claim is not so much causal—he doesn’t present evidence of explicit political thinking directly linked to these changes—but relational: different thoughts about patents became easier to think once the patent “bargain” with the public replaced grants to advance the economic interests of the state.

Kara Swanson picks up the story with “Authoring an Invention: Patent Production in the Nineteenth-Century United States” (p.41). Like Biagioli, she focuses on the patent as text: a document produced with the assistance of experts who shape the form of the patent but still attribute authorship to the “inventor” listed on the patent. Thus, the rhetoric of patents was similar to that surrounding the romantic author in copyright, despite all the helpers behind the scenes. Patent lawyers spoke of the inventor as a genius in need of a ghostwriter, splitting the author-function between the invention and the patent. Yet the authorial function of the patent lawyer was successfully submerged, so that courts now don’t hesitate to identify inventors as “authors” of their patents.

William J. Rankin then turns the focus to patents’ imagined audiences in “The ‘Person Skilled in the Art’ Is Really Quite Conventional: U.S. Patent Drawings and the Persona of the Inventor, 1870-2005” (p.55). Patent drawings have contradictory functions: they disclose an invention to the public, but it’s also in the inventor’s interest to depict an invention as generically as possible to increase the patent’s scope. Thus, patent drawings must both appear to depict real objects and also “leave unanswered many questions of manufacture, assembly, or specific materials” (p.57). The Patent Office specified numerous conventions of depiction, including even the angle from which light was to come in the drawing. Initially, the standard conventions made patents intelligible “at a
glance” and implied that all forms of invention were fundamentally the same and could be understood by the same type of person. Over time, however, the drawings reflected increasing specialization, becoming more like engineering drawings and thus easily comprehensible only to those already familiar with the relevant art. The imagined audience is now “ordinary colleagues and competitors,” not the public (p.72), which creates interesting questions for Biagioli’s argument about the democratic nature of the patent bargain in an age of expertise.

The second section, Before and After the Commons and Traditional Knowledge, begins with Rosemary J. Coombe’s “Cultural Agencies: The Legal Construction of Community Subjects and Their Properties” (p.79). It’s a theoretical examination of the interactions between international norms and local communities and the ways in which those communities use legal concepts for their own ends—or see them used. As Coombe points out, “[t]o the extent that international treaties and emerging legal norms demand that communities provide consent for the use of their knowledge and resources, such communities must be found, and if they cannot be located on one scale, those bearing obligations to secure consent will inevitably find ‘communities’ at another scale who are prepared to bargain” (p.86).

Marilyn Strathern contributes “Social Invention,” a categorization of approaches to intellectual property, from relations of enthusiasm versus antagonism to breadth versus narrowness and communal versus individual rightsholders (p.99). Mark Perlman’s “From ‘Folklore’ to ‘Knowledge’ in Global Governance” then traces the history and politics of the changing terminology of international negotiations on protections for “traditional” IP, arguing that just as authorship has been understood in different ways over time, so has the category of the unauthored, which affects both the definitions of what’s at stake and the concepts of who might be empowered to exercise authority over it (p.115).

Christopher Kelty, in “Inventing Copyleft,” examines a different set of actors: programmers who used concepts of what software programming was and should be alongside their understandings of IP law to create open-source licensing (p.133). Though the actors here are predominantly male, Western, and neither governmental nor part of traditional communities, they, like the subjects of Coombe’s and Perlman’s pieces, appealed to field-specific expertise as a way to shape the claims of IP law to define and govern their respective fields. Despite some language of resistance,
advocates of free and open source software could never escape the claims of IP law, only negotiate with it.

In the spirit of negotiation, Yochai Benkler’s “Designing Cooperative Systems for Knowledge Production: An Initial Synthesis from Experimental Economics,” offers a roadmap for commons-based production, with a variety of “design levers” that might be used to create sustainable systems (p.149). Systems that work, he suggests, will: humanize other participants; build trust; increase communication; reinforce norms of cooperation; and provide both fair outcomes and fair processes, where what is “fair” is highly variable; construct a group identity; and provide mechanisms for dealing with troublesome participants (sometimes by allowing punishment for defectors, but not always). Other relevant features of system design include transparency—we care about openness but also about privacy—the level of self-selection for participants; the cost of a particular structure; the extent to which some kinds of rewards may crowd out others; and the nature of sustainable leadership, especially in a context where outsiders may think that lead contributors are “suckers carrying free riders on their back[s]” (p.161). Of particular note is Benkler’s point that fairness is most easily assessed in a system where contributions are of the same general type. Where contributions are not commensurable or symmetric, so that some people provide labor, others physical capital, and others financial capital, fairness will be both harder to define and harder to monitor, both of which create problems for cooperation (p.155).

The third section of the volume, IP Crimes and Other Fictions, begins with Lawrence Liang’s excellent “Beyond Representation: The Figure of the Pirate,” which provocatively challenges the standard IP restrictionist line that noncommercial users and remixers are sympathetic figures while commercial pirates are obviously to be suppressed (p.167). His argument that critical theorists have ignored commercial pirates because they deal in the realm of pleasure (p.168), which generally poses uncomfortable problems for Western legal theory, rings true.² Piracy doesn’t seem to be a very good example of citizenship, resistance, or creativity, all things that IP restrictionists celebrate when contesting the expansion of copyright and other IP laws. Noncommercial downloading is a Western/high-bandwidth phenomenon, while piracy is associated with Asia, and thus the condemnation of commercial pirates also has a racial and geopolitical component. (For those interested in a fuller discussion of the realities of piracy in emerging economies, the Social Science Research Council has recently published an excellent set of nation-specific studies.)
Liang can’t quite escape the desire to find creativity among his pirates: he argues that pirate networks of distribution involve innovation in difficult circumstances, generating low-cost infrastructure (p.174). He then suggests that “[t]he epics, stories, songs, and sagas that represent in some ways the collective heritage of humanity have survived only because their custodians took care not to lock them into a system of end usage; instead they embellished them, adding to their health and vitality before passing them on to others” (p.176). If we really valued pure curation—something that is perhaps only possible in a system of mechanical reproduction—then we’d at least want to have the old versions to compare to the embellished ones. Liang’s challenge is to ask how we came to value creativity as a universal good; implicitly, he also asks us to reevaluate how we define creativity.

Martha Woodmansee reaches further into the past with “Publishers, Privateers, Pirates: Eighteenth-Century German Book Piracy Revisited,” where she tracks the geographic and political divisions that led some German states to encourage reprinting of foreigners’ works as a means of cultural development. Printers and authors in other states condemned this as piracy, even though it was not against the law (p.181). This is a familiar modern narrative, and one Adrian Johns has recently explored at length in the British context,4 but Woodmansee’s article shows just how persistent the dynamic is: copying legally unprotected content is one way in which developing states have long supported the education of their populations and the development of technological capacity.

Speaking of Adrian Johns, his contribution to the volume, “The Property Police,” traces how IP law developed historically alongside IP enforcement, beginning with publishers’ own enforcement activities in early modern Europe (p.199). Johns argues that the industry devoted to finding and stopping “pirates” has always had a profound influence on what piracy is. Despite the development of professional police organizations, private policing in IP still exists, and can now often recruit public prosecutors. Johns links copyright and patent enforcement; both have required large private investigative forces, and both have raised concerns for heavy-handed invasions of privacy.

Tarleton Gillespie’s “Characterizing Copyright in the Classroom: The Cultural Work of Antipiracy Campaigns” moves from enforcers to educators, examining various pro-copyright curricula promoted by industry organizations designed to teach children and young adults that unauthorized downloading is the same thing as theft and that copying without paying is always wrong (p.215). As he points out, this framing ignores the existence
of fair use and other limitations on copyright, along with public domain or freely shared works. The idea that nothing is really “free” might suit late crony capitalism, but it’s not very democratic. These campaigns attempt to convince students that there is a clear creator/audience hierarchy, and that the only available aspiration for a creative student is to join the ranks of paid professionals—whose interests are profoundly harmed by unauthorized copying. Students are not supposed to be remixers or noncommercial creators, just fans who leave no traces of their own: “The recurring imagery of headphones and air guitar is an ironic reminder: this uncanny absence of production marks how fanhood here is understood entirely as an act of consumption” (p.227). As Gillespie concludes, such campaigns ignore changing legal markets and fail to give children tools to distinguish more clearly between legitimate and illegitimate unauthorized uses, to the probable detriment of the copyright industries themselves as well as of creators more generally.

Peter DiCola’s “An Economic View of Legal Restrictions on Musical Borrowing and Appropriation” then turns to more conventional law-and-economics analysis (p.235). Because music is both input and output, and because rights in music have been carved up in complicated and sometimes unpredictable ways, it’s hard to move from theory to practice, and DiCola spends most of his time categorizing musicians’ options under various conditions and levels of uncertainty. In the end, he suggests, constraints may spur creativity, the way that complex tax laws spur tax avoidance—and tax evasion. I don’t disagree, but I do wonder whether economics gives us useful tools for distinguishing good constraints from bad ones. When he says that musicians who violate a boundary may add interest to their music, or fulfill an artistic commitment to transgression by creating “illegal” art (pp.246-47), I can’t help asking who benefits and who pays under such a scheme. For one thing, gendered distinctions in the acceptability of transgression—both to enforcers and to potential transgressors themselves—mean that deterrence is unlikely to operate equally for male and female artists. Accepting the constraints entailed in writing a sonnet is not really the same thing as accepting the constraints entailed in not ever using any samples without clearing them with the rightsholder.

Section 4, Old Things into New IP Objects, centers around patent law and its discontents. Daniel J. Kevles starts off with “New Blood, New Fruits: Protections for Breeders and Originators, 1789-1930,” discussing private and public regimes for protecting lines of animals and plants (p.253). Bringing in private regimes allows Kevles to point out that public regulation offered some consumer protection-like guarantees of quality or at least
accuracy, compared to less reliable private registries. Ultimately, plant breeders succeeded in getting legal protection for seizing on chance variations in the field. Plant patents thus provide a useful contrast to the inventive requirements of a utility patent as detailed by Biagioli.

Alain Pottage and Brad Sherman’s “Kinds, Clones, and Manufactures” then argues that the modern patent system grew up alongside, and at its core is most comfortable with, mechanically reproducible consumer goods (and the expensive machines that produced them) (p.269). The very proliferation of identical copies demonstrated the primacy of the abstract design behind those copies. Biological materials, however, offered very different relationships between the first in the series and the next, creating conceptual difficulties that the law preferred to ignore rather than work out. Plant breeders who picked the best mutations were “inventors after the fact” (p.277) who convinced policymakers that cloning was basically a quasi-industrial process, ignoring the absence of design or conception in the sense used for utility patents. But this puts pressure on the patent bargain, since a written description is unlikely to be of much use compared to possession of the biological means of production. Thus, patents on biological material will continue to pose difficulties for the patent system.

Cori Hayden’s “No Patent, No Generic: Pharmaceutical Access and the Politics of the Copy” leaves the U.S. system behind to examine the Argentine and Mexican systems (p.285). In Argentina, pharmaceutical patents are functionally unavailable, but brands have taken their place to a certain extent; the first or most successful entity to produce a drug still has a market advantage. In Mexico, as in the U.S., generics have been promoted as a way to “counter the dominance of expensive foreign-made patented drugs” (p.287) and major drug companies have responded by touting the quality of the original. In Argentina, however, the conventional opposition of patented drugs (private property) and legal generics (public domain) is insufficient: Argentina’s nonpatented copies of drugs are neither, and often outcompete the “originator” based on the power of the domestic manufacturer’s brand name. Moreover, high Argentine prices based on branding and on relationships with medical providers created the same need for lower-cost versions as exists in Mexico and the U.S. As Mark McKenna has suggested, patent and trademark protection may be able to substitute for one another to a certain extent, and thus IP regimes cannot be evaluated in isolation⁵—although a regime with only one, as in Argentina, may have a very different form than a regime with both.
Jonathan Kahn, in “Inventing Race as a Genetic Commodity in Biotechnology Patents,” then turns to a recent strategy for achieving patent protection for a drug, or method of use of a drug, that might not otherwise qualify: claiming special utility in a racially defined population (p.305). Race-based patents create economic incentives to engage in race-based clinical research, drug development, and marketing, thus turning race not just into biological fact but into legal right and economic payoff, which may be far more robust and socially powerful.

Pamela Samuelson’s “The Strange Odyssey of Software Interfaces as Intellectual Property” covers the roving IP history of interfaces, from trade secret to copyright and, when the courts approved reverse engineering as fair use, to patent (p.321). Samuelson once argued for sui generis protection for software, but here concedes that the ship has sailed. A combination of trade secret, contract, and patent controls rights in software, including interfaces, today. Ultimately, she suggests, the industry worked around the various legal regimes, remaining highly creative no matter what form of protection was in vogue.

The final section, Doing and Undoing Collaborative IP, is the most far-flung. It begins with Evelyn Lincoln’s “Invention, Origin, and Dedication: Republishing Women’s Prints in Early Modern Italy,” which argues that printmakers who selected which engravings to make prints of and added their own dedications to those prints were asserting themselves as authors (p.339). Their curation and selection of appropriate images deserved credit, which they claimed by adding their own names as well. Lincoln argues that cultural pressures against women receiving too much public recognition made such practices particularly appropriate for female printmakers, who could participate in creative life as long as they signed and dedicated images “invented” by others rather than making their own. Patrons, too, including female patrons, were given credit as the moving force behind the creation of particular prints.

Tim Lenoir and Eric Giannella’s “Technological Platforms and the Layers of Patent Data” then jumps far ahead in time, arguing that patents make the most sense when understood as embedded in a network of other inventions (p.359). Network analysis then allows them to trace relationships between patents (and patenting researchers and firms) and figure out which are the most significant. They argue that such quantitative studies can usefully supplement more qualitative approaches in science and technology studies.
Dotan Oliar and Christopher Sprigman’s “Intellectual Property Norms in Stand-Up Comedy,” by contrast, focuses on an extralegal regime (p.385). Stand-up comics don’t use IP law for various reasons. Instead, they protect their jokes through anticopying norms and, perhaps most significantly, by shifting in the modern era to a particular type of comedy: identity-based, individualized comedy that would be difficult for anyone else to copy successfully. This result, they argue persuasively, should draw our attention to the fact that IP regimes affect not just the quantity but the kind of IP produced. They also highlight that informal IP regimes can’t tolerate the kinds of rights-slicing and careful distinctions that formal IP regimes can, because norm-based enforcement would be too difficult if the rules weren’t extremely easy to understand. Only one person can own a joke, and that’s the person who provided the premise or hired a joke-writer, regardless of whether formal copyright law would assign rights differently.

Fiona Murray’s “Patenting Life: How the Oncomouse Patent Changed the Lives of Mice and Men” examines the community of cancer researchers. They too have norms that changed over time as patent protection became more salient (p.339). After the attempted commercialization of mice with important cancer-related genes caused huge controversy, academic researchers adapted rather than rejecting patents outright. While academic freedom still plays a major role in community beliefs about the appropriate use of patents, researchers also adopted patents as another measure of academic success, alongside journal publication, and used patented mice to negotiate relationships among scientists, including the allocation of credit.

Peter Jaszi concludes with “Is There Such a Thing as Postmodern Copyright?” in which he argues that a constellation of recent cases suggests that courts are absorbing a postmodern ethos from the general culture, in which expertise plays less of a role in evaluating creative works and in which the audience gets more credit and control (p.413). This is a fascinating thesis, though I’m not sure the very distinct cases on which he focuses—Jeff Koons’s reversal of fortune from Rogers v. Koons to Blanch v. Koons (acceptance of appropriation art as legitimately transformative based on the change in meaning worked by the appropriation), Sony v. Universal Studios (acceptance of audience interest in receiving works and making meaning from them), and Cartoon Network v. CSC Holdings (acceptance of the idea that some copies are so transitory that they are outside the control of copyright law)—can be put together to support his claim. But it would be extremely nice to think so.
Overall, this is an excellent collection that would be a great supplement to an advanced IP or IP theory course. If there’s anything missing, it’s a contribution from a scholar who is willing to discuss cultural issues on the same terms as the other contributors but who generally supports the expansion of intellectual property rights. This is not to say that the volume is unbalanced, especially since so many of the pieces are historical or analytic rather than prescriptive, but the collection does reflect the IP-restrictionist tendencies of many legal scholars (which I happen to think are correct).

ENDNOTES


4 Adrian Johns, PIRACY: THE INTELLECTUAL PROPERTY WARS FROM GUTENBERG TO GATES (University of Chicago Press, 2009).


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Few areas of the law have been more affected by the advent of the Internet and digital media than copyright law. Judges, litigants, and scholars often struggle to delineate the proper relationship between proprietors and users in this digital age. This has become especially true after eBay,¹ in which the Supreme Court reinvigorated several neglected factors for obtaining injunctive relief in intellectual property cases, including whether granting an injunction would serve the public interest. Practitioners and scholars now regularly find themselves consulting past instances where technology and other factors tested the bounds of copyright law, sometimes with a desire to adhere to past principles and practices and other times with a view to ensuring that we do not unwittingly repeat them. To help move forward, we are looking backward.

The history of English copyright law—which forms the foundation of Anglo-American copyright law—has remained especially relevant. In resolving doctrinal and normative queries, judges and scholars, including those in the United States, continue to refer to cases and statutes from England in the eighteenth and nineteenth centuries. Indeed, there has been an explosion of interest in recent years on the origins of copyright. Often pitted against each other in modern copyright debates is whether the initial justification for copyright policy was to recognize and reward an author’s right in her work (be it a natural right or otherwise), on the one hand, or to promote the public interest, on the other.

In her recent book, COPYRIGHT LAW AND THE PUBLIC INTEREST IN THE NINETEENTH CENTURY, Isabella Alexander, explores these debates by investigating the “historical pedigree of claims that copyright
operates in the public interest, whether as an overarching goal, or through the balancing of competing claims,” especially as against the rhetoric of romantic authorship (p.3). Alexander focuses primarily on the nineteenth century, which she notes was the period during which copyright law took a quantum leap forward. She concludes that though the public interest had a significant rhetorical impact on copyright law, the concept cannot bear the weight often given to it by modern scholars (p.4), largely because the “public interest” was so variable during the time periods she examines. Oftentimes the public interest was plausibly invoked by parties on both sides of a given debate, diluting any decisive value of the concept.

As the only book to date that focuses directly on the public interest in its historical context, Alexander’s monograph is a welcome addition to the body of scholarship on the history of copyright law. This is especially so given that the book is very well researched and executed.

COPYRIGHT LAW begins by introducing the reader to the various works on copyright history that have preceded it, thus placing its own contribution to the literature in context (pp.4–11). Alexander concisely marshals the dozen or so principal works on the history of copyright into a digestible primer. Apart from serving its principal purpose, this primer will be especially useful for those lacking either the time or the inclination to peruse the key works in the field.

Recognizing that a work on a particular period often requires a discussion of the period that preceded it to provide the proper context, Alexander’s first substantive chapter (ch. 2) discusses early instances in the seventeenth and eighteenth centuries where stakeholders in the debate over copyright began to visibly invoke the public interest as a means of achieving their objectives. She notes that it was right holders who argued as early as 1641 that exclusive printing rights were in the public interest because they provided authors and their booksellers the encouragement necessary to write and publish literary works. Alexander also explains how references to the public interest became much more pronounced in the mid-to-late eighteenth century in the battle in the King’s Bench\(^2\) and House of Lords\(^3\) over whether a perpetual copyright at common law existed independent of the Statute of Anne of 1710 (which had limited statutory terms). Here, she notes, the rhetoric of the “public interest” was invoked by litigants and judges on both sides of the equation. Advocates for the common-law right towed the same line from 1641, that the public would suffer from a lack of learning if copyrights were not protected at common law. Advocates against the right argued that a perpetual monopoly would hurt the public as
it would lead to higher prices on books and could even be abused as a form of censorship (pp.30–37).

Although the House of Lords ultimately rejected the idea of a perpetual copyright at common law, Alexander challenges prior interpretations of this event which conclude that the Lords had rejected as specious that the public interest could be served by a perpetual right. She notes that the same House of Lords enacted legislation soon afterward granting a perpetual copyright to the universities for books bequeathed to them in perpetuity (p.37). As Alexander puts it, the “notion that the laws regulating literary property should serve a public interest was affirmed, but its precise nature remained unclear” (Id.).

The remainder of Alexander’s book tracks and explores the various ways in which the “public interest” concept rears its head in the nineteenth century. Rather than continue her analysis in a purely chronological order, Alexander uses several themes as points of departure. They include: the making of books available to libraries under the requirements of legal deposit (pp.47–63); regulating books of dubious merit through copyright law and other ways to protect the public (pp.63–79); the role the public interest played in shaping debates over the expansion of copyright to new subject matter, such as plays, lectures, and music (pp.81–112, 128–140), to new people, such as to authors from outside of Britain, and to new places, such as for British authors publishing abroad (pp.113–154); and how the public interest was discussed in lawsuits and legislative proposals involving the prima-facie rights of copyright law, including the duration of copyright and whether to broaden a proprietor’s bundle of rights to include preventing others from extracting or abridging the proprietor’s works or from making transformative works of the same (pp.155–233). Alexander ends her book by bringing all of these themes together under the rubric of the Imperial Copyright Act of 1911—the omnibus legislation that codified copyright in Britain and its dependents (pp.234–290).

Alexander draws several conclusions from her research. There are two which are, in my view, paramount. The first is that modern scholars have overstated the historical importance of the “public interest” as the determinative factor in copyright’s development. In fact, the concept was very amorphous. As Alexander concludes in one part of her book: “The ‘public’ itself was far from being a constant or coherent construct” in the debates (p.154). Moreover, the “interest” was also fluid and could serve many masters: “[T]he rhetoric of public interest, in its multitude of forms was used both to resist and to support the expansion of copyright law” (Id.).
In reading her book, I too was struck by how often the rhetoric of public interest was unhelpful to decision makers (be it the courts or the legislature) in deciding the issues before them.

The second major conclusion Alexander draws from her research is that the undoubted expansion of copyright law during the nineteenth century was not, by process of elimination, a singular triumph of the ideal of romantic authorship. Instead, Alexander concludes that a third, as yet unsung, factor played a much more important role in the development of copyright policy. She posits that concerns over market competition and the promotion of commerce regularly emerged unscathed (or what I might call the tie-breaker) from battles between the ideals of romantic authorship and public interest. In her own words: “Despite the claims of many commentators that the law of infringement represents a balance between the interests of the public and those of the copyright owner, this book highlights the central role of competition and the demands of the market in the law’s development” (p.233).

The reader will, of course, have to draw his or her own conclusions from the evidence presented by Alexander. But her interpretations and reasoning are well supported. As a consequence, serious students and scholars of the history of copyright law—whether specialists or not—must now add Alexander’s book to their reading list. I learned much from it.

ENDNOTES


2 Millar v. Taylor, 4 Burr. 2303 (K.B. 1769).


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“It is a little surprising that one can apply for a patent in Kiribati” (p.1). So begins Peter Drahos’ fascinating exploration of the ubiquity and often under-appreciated influence of patent offices around the globe.

THE GLOBAL GOVERNANCE OF KNOWLEDGE: PATENT OFFICES AND THEIR CLIENTS covers the results of an in-depth, interview-based study of 45 patent offices, their operations and policies, and how they fit into the larger global patent network. Of course the large patent offices are covered (e.g., the IP5 members that receive the largest numbers of applications: the U.S.(USPTO), Japan (JPO), China (SIPO), South Korea (KIPPO) and the regional European (EPO) patent offices), but Drahos also includes a diverse cross section of other kinds of offices. Emerging economy offices in India and Brazil, regional offices in addition to the EPO, developing and least developed country offices such as Cambodia, Vietnam, Indonesia, and Kiribati, entrepreneurial offices such as those in the UK, Denmark, and Australia are all represented and tied together in a novel and eye-opening construct that sheds important new light on a system which may, by Drahos’ account, be anything but benign.

As Drahos himself labels patent office administration “an excruciatingly dull topic” (p.xiv), one validly might approach this book with some trepidation. Such concerns are completely unfounded as Drahos turns this enquiry into an intriguing and enlightening explanation of “why our [patent] world is the way it is” (p.xiv) and what we might do to change it. The book is well-researched, engaging, and filled to the brim with thought-provoking nuggets of current and historical information. Even the book’s organization is impressive; beginning by providing a contextual and linguistic framework.
for the study and its results, then discussing well-designed groupings of offices, their origins and particular features, and their role and position in the global patent order.

Drahos asserts, then supports, the contention that patent offices around the world are cooperating and integrating into a global knowledge governance network that exists primarily to serve the interests of multinational corporations (MNCs) sometimes at the expense of, and counter to the interests and policy of, the domestic government and consumers of the country in which the office operates. According to Drahos, the goal of MNCs is to create uniform global patent rules to “make it cheap to obtain patents, that maximize the scope of patentable subject matter and that minimize state control over the technology” all in an effort to build a system of private taxation of technology markets (pp. 4-5). The fact that one can obtain a patent in Kirabati, a very poor island nation with a population of around 100,000 people, is, according to Drahos, emblematic of this goal.

Articulating a modified version of the social contract justification for the patent system as “society offering a monopoly in exchange for the release of an invention of social value,” Drahos posits that patent offices are not currently fulfilling their role in the contract. Namely, in representing society, patent offices have the duty to (1) ensure an inventor delivers (not just discloses) an invention of social value, (2) help diffuse invention information that the inventor reveals in the application process, and (3) ensure the highest degree of patent system transparency to those the system affects (pp. 33-34). Drahos sees patent offices as violating these duties in a number of ways, such as failing to require access to source code for software inventions and not providing comprehensive, user-friendly search systems to make it easy for the public to find relevant patents. The reasons why patent offices fail—often knowingly—in their public good functions are the focus of this book.

After laying his foundational premises, Drahos launches into a deep yet concise and eminently interesting history of the role and rise of patent offices in the global patent system. He traces the rise of specific patent offices, noting along the way interesting historical vignettes that support the longstanding primacy of the patent social contract, such as the early Venetian and French patent system working requirements. Drahos also highlights the interplay between a country’s substantive patent law implementation and its patent office, noting that a country with a clearly delineated substantive patent law but no patent office, such as Indonesia between 1953 and 1989, is still unlikely to issue many patents, even though
the country received thousands of applications during that time period. He further identifies patent offices as “crucial sites of interpretation of patent law” (p.11) indicating many ways in which substantive patent law can be manipulated through patent office rules. For example, while Switzerland’s patent law in the early 1900’s provided for patents on methods, the patent office required the submission of models for all inventions, effectively eliminating the availability of process patents. One current development Drahos considers particularly pernicious is the proliferation of claim drafting formats that facilitate the expansion of the subject matter of patents and that then spread virally to examiners in other offices who may not fully understand what the new claim format is protecting.

According to Drahos, history and cost help explain the world’s poorest countries have patent offices and why they are being brought into the global patent fold. Many offices in the poorest countries represent the lingering remnants of colonization when European patent laws were imported wholesale into numerous colonies through military or economic coercion (p.143). As he notes, imperialism not only spread the patent institution much faster and farther than might have occurred naturally in developing countries, but the type of patent system seen in these countries would likely be different as well and more tailored to a particular country’s needs (p.113). The fact that one could re-register a UK patent in Kiribati, a British colony, in the early 1900’s, had virtually nothing to do with the needs of the indigenous population but rather facilitated market division and relations among European powers.4

Things are not much different today, as Drahos details the reinvigoration of the UK re-registration system through the European Patent Convention (EPC) and Patent Cooperation Treaty (PCT), and the economic coercion of the TRIPS Agreement and TRIPS-plus bilateral agreements. It seems to be déjà vu all over again. He also illustrates how new patent colonization mechanisms are emerging, with many developing countries today having express (e.g., granting patents based on the grant decision in another country) or de facto (granting patents based almost solely on examination results from another patent office) patent re-registration regimes, a situation that may be far from optimal for the particular society in which the office resides. He also uses the striking difference in pharmaceutical application filing rates in Vietnam and Cambodia to demonstrate an effect (a significant increase in total and specifically pharmaceutical patent applications) of PCT accession that developing countries may not fully appreciate (pp.270-272). Moreover, while there is nothing new in the assertion that the bulk of patents in developing and least developed countries are foreign-owned,
Drahos’ interviews with patent office officials in several such countries reveal a uniformly negative perception of the competence of local patent attorneys (except for those employed by MNCs). While the perception may be based on reality, even where it is not, it points to a fundamental difficulty that local inventors in such countries will face in trying to obtain patent protection at home, let alone abroad.

From a cost perspective, Drahos illustrates that it is relatively cheap for large developed country offices, such as the EPO, to provide a variety of “technocratic trustbuilding” aids, such as examiner training and exchange, examination manual production, and prior art databases to allow developing country offices to automate and “mimic” developed country office patentability decisions. The trust developed also reinforces a hierarchy among patent offices, with the EPO being perceived by many smaller offices as providing perhaps the highest quality examination. Moreover, patent offices are jockeying for position in the global order, by, *inter alia,* seeking WIPO (World Intellectual Property Organization) International Searching Authority (ISA) status under the Patent Cooperation Treaty (PCT) (recently achieved by Egypt and Israel in addition to India and Brazil), as well as seeking leadership positions (being the “go-to” office) in a particular region (p.254).

Drahos provides a timely account of the origins of the global patent machine in operation today, tracing the history and development of individual patent offices with the enduring remnants of colonization providing a constant echo. He intertwines these strands in a narrative that describes a system divorced, in some cases, from the public and societal interest that justifies it. What emerges is a troubling picture of a global regime that exists to facilitate MNC collection of private taxes in the form of patent rents, populated by patent office employees who in many cases lack a clear concept of the larger societal ramifications of their actions. For example, with an anecdote from one of his interviews, Drahos illustrates the potential for disconnect between a patent office and the larger society in a developing country and how cheaply integration into the global governance network can be purchased:

**Patent official, Pacific island country:** We are planning to join the PCT.

**Drahos:** Why?

**Patent official:** The PCT will generate more applications and more fees for the patent office.
**Drahos:** What if more pharmaceutical patents are registered and cause problems for your population in terms of access?

**PAUSE. . .**

**Patent official:** We haven’t thought of that (p.336).

Drahos traces this disconnect to the profound impact of switching to a self-funding business model. This model allows offices to keep their fees instead of returning all revenue to the general treasury, but leads to a focus on more applications to drive revenues, and the efforts necessary to keep clients, not the public, happy and coming back for more. This is a debate which is currently playing out in the US. By creating dependencies on revenue generation from application and maintenance fees and the parties who pay them, patent office focus and incentives shift to being not only more pro-patent, but also more sensitive to MNC interests. This model has trickled down to many smaller countries, often resulting in a situation where the patent office may be very pro-patent, while the rest of the country may be more concerned about access to medicines and other development issues. Drahos refers to this as a type of patent office “schizophrenia” (p.254), which can be especially problematic when the patent office is looked to by others in the government for expertise in setting a developing country's patent policy.

Drahos describes the domination of patent offices by a relatively small number of MNCs and the unsettling results of the TRIPS-induced need for developing countries to fairly quickly develop an examining corps and infrastructure to handle applications covering inventions in every field of technology, including pharmaceuticals. This need not only results in heavy dependence on larger patent offices and WIPO “missionaries,” for training, guidelines, and technical assistance, but also on the training of examiners by patent attorneys from firms representing MNC companies (p.249). Another unfortunate but not surprising result is that patent office hiring of examiners tends to further reduce the already small pool of valuable scientific talent that might otherwise engage in inventing and technologically advancing a developing country from within an industry or university setting.

Drahos delivers a strong indictment of patent offices—and the patent attorneys who practice before them and benefit from their pro-patent policies. He argues that these offices all-too-often abdicate their national patent social contract responsibilities to their respective publics by pandering to the interests of MNC’s directly and indirectly, such as by
participating in treaty negotiations to create ever more pro-patent laws and policies. To the extent one believes a pro-patent agenda is a good thing, these patent offices should be applauded, not castigated. Moreover, while patent offices certainly play a critical role in the patent system, all of the ills chronicled in the book cannot be laid (directly at least) at their doorstep, for example, the historical colonization that led to the imposition of patent systems on many developing countries in the first place. Nevertheless, there can be too much of even a good thing, which Drahos seems to suggest is the case in relation to a strong pro-patent agenda that has already begun to eviscerate the social contract.

The picture painted by Drahos is not completely bleak, however. He does note the virtues of several patent office initiatives in helping less developed offices handle the costly and resource intensive examination responsibilities required under their laws in a way that enhances quality over what they likely could do alone. He also highlights the genuine desire and efforts of many patent offices to draw more small and medium sized enterprises into using the patent system. He also shows patent offices as the complex, multifaceted organizations that they are, noting, for example, JPO initiatives to help Japanese companies obtain patents in foreign countries faster (p.175).

Finally, after delivering the “bad” news about the current global patent office system, Drahos discusses several controversial ways in which the patent social contract can be renewed and patent offices held accountable, such as the formation of outsider governance networks, introducing the separation of powers principle to break up unhealthy (to society) concentrations of power in the system, external audits, increasing transparency and more. Some of these proposals seem quite radical and doomed to failure. Nevertheless, incremental progress is possible. For example, a positive (if small) transparency development in this direction since the publication of this book is the expansion by WIPO of an online search tool providing access not only to PCT applications, but also to the previously inaccessible (or difficult to access) patent collections of 24 countries and three regional offices, thus enhancing public access to patent documents. Drahos also has special advice for developing countries, such as using their sovereignty to make patent offices part of the public, not private, nodal governance network, careful use of outsourcing of the patent social contract, and learning from the mistakes (and successes) of countries like India and Brazil.
THE GLOBAL GOVERNANCE OF KNOWLEDGE: PATENT OFFICES AND THEIR CLIENTS is a timely and, I expect, enduring contribution to the patent literature. It should be required reading not only for patent office personnel, attorneys, and scholars, but also for government officials and legislators, particularly in developing countries, who could benefit from a better understanding of the role, motivations, and limitations of the patent office in their country as they formulate laws and policies that concern public health, technology transfer, innovation, and more. One need not agree with all of Drahos’ conclusions to derive a significant benefit from the book. Examples of the trends identified by Drahos abound: Qatar and Rwanda recently acceded to the PCT, the IP5 continues to make progress on a group of worksharing initiatives, bilateral patent prosecution highways between various offices are proliferating, and the Vancouver Group (comprising the UK, Canadian, and Australian patent offices) has been formed to share work and results (between these offices having a common cultural and legal tradition), and create a new examiner worksharing tool with WIPO. Of course, how these trends will manifest themselves in the future and whether there will be significant benefits to individual countries and the greater global society remains to be seen.

ENDNOTES

1. The complete omission of African country/regional offices from the interviews is puzzling; however, several are discussed in later chapters.

2. According to Drahos, “each time a patent office grants a patent, it issues a right to collect taxes” (p.8).


5. Noting that in 2007, 3.6% of applicants in the German Patent Office accounted for 60% of the applications (p.15).
Another fascinating account of this type of influence is provided in Carolyn Deere, THE IMPLEMENTATION GAME: THE TRIPS AGREEMENT AND THE GLOBAL POLITICS OF INTELLECTUAL PROPERTY REFORM IN DEVELOPING COUNTRIES, 257-58 (Oxford University Press, 2009).


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Trademark law has come into its own. Traditionally, trademarks were lumped together with patents as “industrial property,” with the law following suit. With the rise in consumerism, marketing and globalization, trademarks and the law surrounding their protection has become important, separate and apart from other forms of intellectual property. After all, when more than half of Apple, Inc.’s valuation (deemed to be the world’s most valuable global brand in 20112) derives from its trademarks,3 legal issues surrounding the protection of such wealth are bound to arise. In recent years, scholars have begun to focus their attention on this previously under-studied area. A testament to the richness of this recent scholarly upsurge in trademark law is Graeme Dinwoodie’s and Mark Janis’ compendium entitled, TRADEMARK LAW AND THEORY: A HANDBOOK OF CONTEMPORARY RESEARCH.

TRADEMARK LAW AND THEORY brings together a global collection of nineteen highly-respected scholars and is an excellent resource for practitioners, students, and trademark scholars, alike. Dinwoodie and Janis have handily split the compilation of articles into three topical sections, which helps guide the reader through the variety of theories and arguments presented. The organization also provides possible topical pathways to lead an advanced trademark law class or seminar, and thus is helpful to the educator as well. As a note of caution, however, it should be made clear that TRADEMARK LAW AND THEORY is not intended for the uninitiated. Rather, the reader needs at least a baseline understanding of the standard accounts of trademark law in order to appreciate the scholarship represented in this collection. This is especially true in the first topic, entitled “Methodological Perspectives,” which provides an array of
theoretical frameworks through which trademark protection can be viewed. Ranging from historical to semiotics to economic perspectives, each of the five articles in this section gives a slightly different account of trademarks and the law surrounding their protection.

It has become a truism that the scope of trademark protection has been on an expansionist path since the early twentieth century. From an expansion in the subject matter that may comprise a trademark to an expansion in the scope of likelihood of confusion (the standard by which trademark infringement is tested), trademark law has progressively expanded in one direction: toward providing a greater scope of rights to trademark holders. While one of the more standard explanations for such expansion has been that trademarks are being treated as “property,” Lionel Bentley questions this explanation from a historical perspective (pp.3-41). Bentley provides a well-documented historical account that traces the term “property” as applied to trademark rights to the mid-to-late nineteenth century (pp.15-30). Bentley’s analysis shows that historical material can help with tracing different reasons for the current trend of expansionism and in explaining why the term property did not have a transformative effect on trademark rights in the nineteenth century. Bentley concludes that it has likely been a transformation of the substantive meaning of the term “property” since the nineteenth century, rather than an adoption of a property rhetoric, that has resulted in an expansion of trademark rights (p.41).

From Bentley’s historical perspective, the reader is treated to a semiotic account of trademark law and culture, through Barton Beebe’s thought-provoking essay (pp.42-64), which provides the reader with an alternative theoretical justification for supporting and understanding certain trademark doctrines. Semiotics, as “the study of signs and sign systems” (p.42), brings a structural approach to viewing trademarks, which is a different account than the standard economic one (p.43). Beebe argues that the application of semiotics to trademark doctrine is a worthwhile enterprise because the standard efficiency arguments of economics do not fully account for certain trademark doctrines such as trademark distinctiveness and trademark dilution (p.43). In fact, the semiotic, triadic structure of trademarks (the triadic structure consisting of a signifier (the trademark itself, like APPLE), a signified (the meaning or goodwill attached to APPLE, such as quality consumer electronics) and a referent (the tangible product that APPLE signifies, such as personal computers or cell phones) (p.45)), appears to be an implicit assumption in the standard economic account (p.48). But due to the economic rationale’s failure to recognize the implicit adoption of the triadic structure, certain troublesome doctrines, like trademark dilution, are
presented as simply another form of trademark infringement. However, when analyzed through the semiotic lens, it becomes apparent that dilution is far more problematic than already acknowledged, as it entails the granting of “absolute property rights, against the world, in that mark” (p.59). Beebe himself leaves implicit that this expansion of rights through protection against dilution may not be what anyone wants, even those in favor of the economic account. Perhaps more disturbing is that it would appear a semiotic explanation of the cultural implication of trademarks in modern society hints that further expansion of trademark law is likely in store in order to meet the consumer demand for “signs, distinctions, differences” (p.64).

However, a re-examination of the search costs rationale (the economic justification for trademark protection) may provide some check on this trend, as Stacey Dogan and Mark Lemley suggest in their essay (pp.65-94). Dogan and Lemley argue that if taken to the extreme, the search costs rationale may lead to a reversal of the goal of the economic justification for trademark law and lead to an anti-competitive marketplace (p.66). Therefore, Dogan and Lemley proffer a different application of the search costs rationale: one that would serve to limit trademark protection to where search costs are lowered, but without going too far in the other direction. The reasoning proffered by Dogan and Lemley is that each of the doctrines discussed in the essay present search costs rationales on both sides of protection: finding in favor of the trademark holder may reduce competition, whereas finding in favor of limiting trademark protection may increase confusion and thereby search costs (p.84). Dogan and Lemley argue that courts will generally find in favor of limitations in a way that attempts to benefit the most number of consumers, where overall search costs would be lowered or where competition concerns are paramount. Additionally, Dogan and Lemley offer useful modifications in the application of these doctrines to provide courts with the ability to appropriately apply limitations.

While the first three essays in the “Methodological Perspectives” section looks at justifications of trademark law and its expansion as a whole, the last essay in the section by Clarissa Long (pp.132-147), provides an examination of the forces that have created and shaped a particular portion of trademark law, trademark dilution. Dilution is one of the more recent expansions in trademark law, beginning in the twentieth century. Although Congress codified federal dilution protection in 1995, many courts applying the doctrine were unwilling to broadly interpret the statute, culminating in the Supreme Court’s narrowing of the scope of the law in
2005. Not long after this Supreme Court decision Congress revised the statute to reinstate its expansive scope in 2006. Long examines this tug-of-war between interpretation and legislation, providing a number of insightful explanations for why Congress adopted dilution in the first place and why courts were eager to narrow its scope (pp.142-43). Unfortunately for the reader, at the time of Long’s writing, courts had not had enough time to fully interpret the new provisions of the federal dilution law (p.146). However, Long is optimistic and argues that courts should continue to act in conformity with their past actions as a counterweight to the Congressional expansion of dilution law (p.147).

For a slight change in pace, the fourth essay in the series, Robert Burrell’s Trade Mark Bureaucracies (pp.95-131), looks at justifications for the registration of trademarks, which as he rightly notes, is an under-examined area (p.95). The first main justification Burrell examines in-depth is the “clearance cost” justification. This justification is premised on the argument that a trademark registry provides a certain level of comfort to the trademark applicant and to the consuming public: with a simple search, all who are interested know which marks are taken by others. Burrell quickly debunks this justification by showing the problems of false negatives, false positives and the quality of the information provided by registries (pp.98-109). In addition, Burrell examines two additional justifications, first, that registration can provide protection to a trademark holder prior to actual use of such mark and second, that registration creates the property rights in the trademark. Concluding that neither of these provides sufficient justification for registration, Burrell concedes that abolishing the registration system would be extremely difficult. Instead, Burrell suggests a number of lines of thought that could be used to reform the registration system, including calling attention to the current emphasis on “customer service” that may be undermining the policing of applications.

The second section in TRADEMARK LAW AND THEORY turns the reader to “International and Comparative Dimensions” of trademark law. Unfortunately for the reader, this section would be more appropriately named “International and European Perspectives,” as the essays (with the exception of Burton Ong’s bilateral free trade agreement-focused essay) are all focused on European issues of trademark law. The section could have been more well-rounded if one or two of the essays were focused on other areas of the world, such as Latin America, the Middle East or Asia. This is not to say that these essays are not invaluable, to the contrary, these essays provide an American reader with an insight into two of the top issues in current European trademark law: harmonization of the laws and parallel
importation. These insights are desperately needed, as a good deal of
discussion of American trademark law takes place without an inclusion of
such comparative dimensions.

For example, Annette Kur’s essay, Fundamental Concerns in the
Harmonization of (European) Trademark Law (pp.151-176) and Gail
Evans’ essay, Substantive Trademark Law Harmonization: On the
Emerging Coherence Between the Jurisprudence of the WTO Appellate
Body and the European Court of Justice (pp.177-203), provide the
American reader with a perspective of trademark law that really does not
get raised in the United States. Since American trademark law is federally-
based (for the most part),\textsuperscript{10} it is rare that discussions of harmonization of
trademark legal doctrines across the fifty states arise. In addition, with the
ambiguous nature of World Trade Organization (WTO) Appellate Body
rulings vis à vis American domestic law,\textsuperscript{11} the harmonization of the United
States Supreme Court decisions (or any other U.S. federal court) with the
WTO rulings is not typically at the top of the list of trademark law concerns
in the U.S. Therefore, the essays by Kur and Evans are a welcome addition
to the average American trademark law scholar’s (or student’s) knowledge
base. And while Thomas Hays’ essay, The Free Movement (or Not) of
Trademark Protected Goods in Europe (pp.204-228), is focused on
European concerns of parallel imported products, with concerns regarding
parallel importation into the United States on the rise,\textsuperscript{12} this essay raises
important and interesting issues for any trademark scholar.

The last essay in this section will be of interest to the internationally-
minded American trademark law scholar or student. Burton Ong provides a
concise overview of the trademark law provisions of the various bilateral
free trade agreements that the United States has entered into over the years
(pp.229-255). Ong shows that there are at least three categories of
provisions that the United States includes in all of its bilateral free trade
agreements. Ong posits that these similar provisions (in the “TRIPS-plus”
category) across the “web” of bilateral free trade agreements provides “a
clear factual basis for those who have criticized the use of bilateral [free
trade agreements] as a ‘forum-shifting’ device of sorts to set higher
intellectual property standards outside of multilateral regimes such as the
TRIPS Agreement” (pp.248-250). Although Ong finds this movement
towards TRIPS-plus trademark law protection worrying (pp.254-255), he
concludes on a hopeful note (echoing that of Long’s conclusion), which is
that in the implementation and interpretation of these various provisions,
courts will be skeptical in applying these provisions in a broad sense
(p.255).
The third, and last section of TRADEMARK LAW AND THEORY is entitled “Critical Issues,” and presents four subsections of a variety of issues; the first two issues (free speech and limiting trademark rights) have plagued scholars of trademark law during its expansion over the past century and the last two issues (traditional knowledge and the edges of trademark protection) are of more recent vintage. The first subsection, “Trademarks and Speech,” begins with a revisiting by Rochelle Cooper Dreyfuss of her groundbreaking work in trademark law and free speech interests from the 1990s (pp.261-293). Dreyfuss’ earlier work had recognized that the expansions in trademark law were placing pressure on the interests of free speech, with courts providing an increasing amount of protection to trademark holders of marks that were merely used in an expressive format (p.262). In this essay, Dreyfuss examines the doctrinal approaches that have been taken globally to resolve this tug-of-war between protection and expression (pp.267-283), and argues that in the end, the better normative approach is for lawmakers to take into account the recent scientific evidence that shows how consumers actually deal with confusion (pp.287-293). Dreyfuss concludes that some confusion and even dilution is inevitable: “In an economy in which consumers have immediate access to products and services everyone on the globe, in a legal environment in which symbols are protected in multiple ways, in a culture in which trademarks constitute a significant medium of expression, freedom from all sources of confusion or dilution is simply not achievable” (p.293).

Moving from general expressive uses of trademarks, Rebecca Tushnet’s essay (pp.294-323) examines an important connection between the First Amendment and trademark law (including false advertising law). Tushnet points out that if the First Amendment’s increasing concern for commercial speech were applied wholesale to trademark law, many standard assumptions and doctrines would be overturned (p.303). The crux of the problem is that First Amendment jurisprudence treats true and false commercial speech as polar opposites; trademarks and advertising, however, can be confusing to some and helpful to others. But the current First Amendment jurisprudence cannot take into account this type of “shades of gray” analysis. Tushnet suggests that each area of the law could learn from the other, concluding that “[t]here are insights to be had from a hard look at the First Amendment from an unfair competition perspective, as well as from a hard look at unfair competition law from a First Amendment perspective” (p.323).

The last essay in this subsection (pp.324-341), provides a fresh look at the overlap between trademarks and expressive uses from the perspective of
both the trademark owner and third party user. In particular, Michael
Spence is concerned that the current justifications for “allusive uses” do not
provide sufficient support for restrictions against such use (p.326). In other
words, Spence seeks to provide an alternative justification for the doctrine
of trademark dilution, as it is more commonly referred to in the United
States. The justification proffered by Spence is one of “expressive
autonomy,” which takes into account the right of the trademark owner to
restrict allusions to its registered trademark, as well as the right of a third
party user of the same trademark (p.331). On one side, the trademark
owner should be free from a compulsion to express something that it has not
chosen, as well as be free from subsidizing a message it does not want to be
associated with (pp.331-335). On the other side, trademark users should be
allowed the right to allusive uses, despite these rights of the trademark
owner (p.337). Therefore, Spence identifies two situations where third
parties should be permitted to make allusive uses of registered trademarks:
first, where the use is necessary for the third party to “adequately” refer,
comment or identify his own products (p.337), and second, where the
trademark at issue has become an “important indexical function” that “the
mark may have become a kind of public forum” (pp.338-339). Spence
concludes his essay by arguing that it is this ability to allow both the
trademark owner and the third party user limited rights to restricting
allusive uses, on the one hand, and allowing the same on the other, that
makes an expressive autonomy justification “particularly attractive”
(p.341).

The next subsection, “Limiting the Scope of Trademark Rights,” can be
viewed as an extension of the first subsection in that the authors are
discussing ways in which trademark rights can be cabined. Instead of
focusing on the free speech concerns of expansive trademark rights,
however, the three authors in this subsection each offer a different
perspective. Beginning with Jennifer Davis’ essay (pp.345-367), the reader
is exposed to an examination of two similar traditions of cabining expansive
trademark rights, one in the United Kingdom and one in the United States,
with one tradition more vulnerable to modern limitations than the other.
Davis traces a tradition of a “trademark commons” in the United Kingdom
from the late nineteenth century all the way to the late twentieth century,
where British judges protected the right of competitors to use registered
trademarks that were of descriptive or “laudatory” origins (pp.347-353). In
contrast, the tradition in the United States has been one of a “public
domain,” borrowed from copyright law (p.361). Davis posits that it is in the
different approaches to the trademark commons and the public domain that
made the trademark commons vulnerable to “enclosure” (p.365). Although
Davis does not explicitly state this, it would seem that an enclosure of the trademark commons has resulted in a limitation of the common law’s ability in the United Kingdom to cabin the expansive scope of trademark rights.

Graeme Austin’s essay (pp.368-403) brings the reader back to the United States, where trademark infringement lawsuits are typically viewed with the belief that an application of the likelihood of confusion analysis encapsulates the appropriate, fact-based consumer response to a defendant’s use of plaintiff’s trademark (p.370). Austin proffers that trademark infringement is not this easily resolved, and nor should it be (p.370). Instead, Austin suggests that courts should be looking “a little harder at the role played by the ‘ordinarily prudent consumer’ in trademark law” (p.371). In so doing, Austin offers that courts would take into account differing policies that underlie trademark law, which would be beneficial as it would serve to cement the role that such policies play in the development of trademark law (p.371). Implicit in Austin’s essay is that if courts were to follow his suggestions, expansive trademark rights would be limited because it is not clear that an elimination of any likelihood of confusion is a benefit to consumers. Utilizing the fair use defense in trademark law as a foil, Austin points out that there are other policies, such as competition, which benefit consumers but may be reduced due to an over-emphasis on the “unassailable empirical truth” of trademark law’s likelihood of confusion (pp.370, 402-403).

As the final essay in this subsection, Eric Goldman brings to light the very real dangers posed by over protection of trademarks in the online context, where consumers utilize trademarks in their assessment of products (pp.404-429). Unlike in the offline realm of consumer “word of mouth,” critical consumers in the online realm can be more powerful in shaping other consumers’ perceptions of products and brands (pp.404-05, 413). Although this creates for trademark owners unprecedented levels of accountability for their actions, Goldman warns that inconsistent application of current trademark doctrines threatens to undo this benefit for consumers (p.405). More specifically, Goldman insightfully shows how courts applying current doctrines such as the “use in commerce” analysis, the inchoateness of likelihood of confusion analyses and the narrowness of the trademark fair use defenses, can function to excise online word of mouth (pp.414-428). This allows trademark owners to delete from the Internet those reviews and opinions that are not favorable to the owners, which eliminates a crucial segment of information regarding products and brands that is beneficial to consumers. As a parting reminder of the importance of limiting these doctrines (of which Goldman provides several helpful
Goldman concludes, “[t]aken to the extreme, the depletion of negative online word of mouth reduces the utility of the Internet as a credible information resource, forcing consumers to seek other information sources that may have higher search costs” (p.429).

The third subsection in this “Critical Issues” part of TRADEMARK LAW AND THEORY turns the reader to one of the more recent areas of trademark law scholarship, that of traditional knowledge. On the whole, scholarly attention to the area of traditional knowledge and its relation to trademark law is more recent, as Susy Frankel points out in her essay (pp.433-463). Historically, protection of indigenous peoples’ rights in traditional knowledge and cultural intellectual property has been considered more in light of patent or copyright protection (p.433). However, Frankel and the second essay author in the section, Coenraad Visser (pp.464-478), show the reader that thinking of traditional knowledge in terms of trademark law is not far off the mark. But both Frankel and Visser are quick to point out that trademark law has been used to both undermine protection in traditional knowledge, as well as boost it (pp.434, 464). Perhaps it is not surprising, then, that both scholars ultimately conclude that trademark law is not the perfect fit for protection of traditional knowledge. Frankel suggests that a trademark-type of system to protect cultural intellectual property in signs and symbols would be beneficial, but one that is specifically geared to the needs and concerns of indigenous peoples (pp.462-463). Similarly, Visser suggests that future protection of traditional knowledge may need to come in the form of alternatives to trademark law, such as the development of a “supranational information infrastructure,” or even a regime closer to copyright law (pp.477-478).

The final subsection, “The Edges of Trademark Protection,” provides the reader with a contemplation of two under-explored trademark issues, that of trademark law’s intersection with copyright (pp.481-497) and trademark protection of product design (pp.498–522). Jane Ginsburg’s essay brings in a well-rounded view of copyright’s influence on trademark law: both the good and the ugly. Ginsburg provides a critical examination of the United States Supreme Court case, Dastar Corp. v. Twentieth Century Fox Film Corp., in which the Court strictly construed the federal trademark law’s “origin of goods” language of “false designations of origin” cause of action to simply physical goods (p.484). In doing so, Ginsburg argues that the Court “overlooks the role that the author’s name plays in conveying information material to the purchasing decision” (p.484). From the bad influence that the Court’s misapplication of copyright principles has had on trademark law, Ginsburg moves onto the good influence, positing that it is
from copyright’s influence that free speech-based concerns are limiting the expansive scope of trademark protection (pp.490-497). Ginsburg concludes that the influence of copyright law on trademark’s fair use defense “shows us that copyright concepts and methodologies can salubriously influence trademark law, not by cordoning copyright off from trademarks, as in *Dastar*, but by recognizing and drawing the best from the overlap in subject matter and (where relevant) in the rationale for extending or denying protection” (p.497).

Last, but not least, Alison Firth takes up an exploration of trademark law’s protection of product designs, the so-called “Cinderella” of intellectual property (p.498). Firth provides a true comparative look at the protection given to product designs under European, American, Canadian, New Zealand and Japanese trademark law (pp.498-522). Firth points out an interesting paradox: although trademarks “carry quality and ‘lifestyle’ messages as well as indications of origin,” product design, even where it is protected as a trademark, is held firmly to a traditional notion of a trademark, that of source of origin (p.501). Although Firth is cautious in drawing any broad conclusions from her comparative analysis, she does note that in certain jurisdictions, like the United States, where design protection is based on more narrow criteria, conversely, registration of shapes is more generous (p.522).

All in all, TRADEMARK LAW AND THEORY: A HANDBOOK OF CONTEMPORARY RESEARCH, provides the reader with an excellent overview of the threads of current trademark law scholarship. Each essay could easily stand on its own, but in such a well-rounded compilation such as Dinwoodie & Janis have put together, each essay adds context and value to the others.

ENDNOTES


3 Compare Apple 10-K for 2010 (listing total shareholders’ equity as $47.8 billion) with BRANDZ TOP 100 MOST VALUABLE GLOBAL BRANDS: 2011, supra note 2, at 5 (listing Apple’s valuation at $153.3 billion).


6 See, e.g., Glynn Lunney, Trademark Monopolies, 48 Emory L.J. 367 (1999); Lemley, supra note 5, at 1687.

7 Some scholars trace the beginnings of dilution (as applied by the courts) to Yale Electric Corp. v. Robertson, 26 F.2d 972 (2d Cir. 1928). Frank Schechter’s seminal article, The Rational Basis of Trademark Protection, 40 Harv. L. Rev. 813 (1927), is considered the genesis of dilution in the United States. See Robert G. Bone, Schechter’s Ideas in Historical Context and Dilution’s Rocky Road, 24 Santa Clara Comp. & High Tech. L.J. 469 (2008).


10 Many (if not all) of the states maintain a set of laws and a system for trademark registration that mirrors that of the federal trademark law (the Lanham Act) and the United States Patent & Trademark Office. However, trademark infringement lawsuits brought on state law grounds are generally decided based on federal law precedent, with courts acknowledging the similarity of the two. The only area perhaps where state law may have a unique role in trademark infringement lawsuits is in the area of unfair competition. See, e.g., ITC v. Punchgini, 518 F.3d 159 (2d Cir. 2008) (revisiting trademark infringement case based on New York state law, which provides a protection against unfair competition not based on use of a trademark in New York, versus federal law which does not).

11 The United States has still not conformed to two adverse WTO dispute settlement rulings. See Panel Report, United States -- Section 110(5) Copyright Act, WT/DS160/R (June 15, 2000); Dispute Settlement Summary, United States -- Section 110(5) Copyright Act, WT/DS160, Summary of the dispute to date at Feb. 24, 2010) at
http://www.wto.org/English/tratop_e/dispu_e/cases_e/ds176_e.htm (last visited on May 27, 2011).

12 See, e.g., Costco Wholesale Corp. v. Omega, S.A., 131 S. Ct. 565 (2010) (affirming, in a 4-4 decision, the Ninth Circuit opinion that the first sale doctrine does not provide an exception to a copyright claim for parallel imported goods); Exhaustion and First Sale in IP, Conference held at Santa Clara Law School on Nov. 5, 2010, http://law.scu.edu/hightech/first-sale-conference.cfm.


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FIGURES OF INVENTION could plausibly be described as Justice Joseph Story’s observation that “the doctrine of patents may truly be said to be the metaphysics of the law”1 meets Jacques Derrida’s iconic aphorism “there is nothing outside the text.”² For the faint-hearted this is, perhaps, reason enough to skip the book, but this would be a grave mistake. Pottage and Sherman have produced an insightful, fascinating and original work. It examines a topic that has recently attracted growing attention—the history of patent law in the nineteenth and twentieth centuries—from a novel and uncommon perspective. In pursuing their project of retracing the emergence of the concept of the invention in modern American patent law the authors combine insights and methods from the fields of history, sociology of science and technology, linguistics, and law. The outcome is a rich synthesis that adds an important and illuminating layer to our understanding of how the most fundamental constitutive concept at the heart of the modern field of patents—the invention—was created and reshaped over the course of two centuries.

What is an invention? Contemporary patent lawyers are rarely bothered by this question. Their focus is typically more pragmatically fixed on doctrines (such as patentable subject matter, novelty or non-obviousness), or on practices (such as claim drafting, prosecution of a patent application, or establishing an infringement claim in litigation). Nevertheless, the concept of the invention lies at the heart of the patent system. It is an element which is taken for granted, around which most patent discourse is organized. The underlying concept of the invention gives meaning to the doctrines and practices at the very same time that it is constituted and shaped by them. The invention acquired this status simultaneously with the rise of the
modern concept and praxis of intellectual property. The two are thus closely intertwined. Scholarly accounts differ greatly in dating the rise of intellectual property with some locating it as early as the fifteenth century. As Pottage and Sherman correctly point out, however, key elements of the modern ideology of intellectual property are the assumption that ideas rather than artisan skill or know-how are the prime movers of innovation and a sharp distinction between the artisan and inventor as the creator of intellectual ideas (p.29). Those elements consolidated only in the late eighteenth and nineteenth centuries. In the area of patents the concept of the invention was the main locus where those conceptual developments were played out.

Justice Story made his observation at the moment of this rupture when a new set of assumptions and concepts was beginning to take hold. This accounts for the metaphysical nature that Story associated with patents, and which he elsewhere attributed to copyright as well. It was at the time when one conceptual system was declining and another one was beginning to take its place that the background assumptions of the system were exposed and were experienced as metaphysical. Another reason was the obviously constructed, or as Pottage and Sherman put it, “fabricated” nature of the invention (p.17). In the new scheme of intellectual property inventions were designated as intangible, ideal objects of property and clearly distinguished from any material apparatus, commercial trade, or person embodying artisanal skill. Once this happened, courts, lawyers and commentators were faced head on with the daunting task of having to define the invention and demarcate its borders. One, after all, does not encounter inventions in the abstract, idealist sense that the term came to denote in patent discourse on the streets or even in research laboratories. Beginning with the 1795 great English case of Boulton & Watt v. Bull Anglo-American courts and commentators found themselves in a struggle to come to terms with the invention. The struggle took many doctrinal and conceptual forms, but in nineteenth century American patent jurisprudence its most elaborate and intense manifestation was the question of the patentability of “principles.” In 1835 one commentator in the Westminster Review described the word “principle” in patent law as a “law- fantom,” a “witchcraft used by the lawyers [that] consists in mingling three different meanings together, used by the aid of certain professional solemnities, producing a mystical word, capable of harlequinizing an idea into many various forms.” No matter how much treatise writers and judges denied this observation and tried to explain that the source of the problem was a semantic confusion, the vexing question of the patentability of principles came back to haunt them during the entire century. Looking back in 1890,
the treatise writer William Robinson commented on this century-long confusion. He was too sanguine when he claimed that at that point the issue was resolved and the meaning of invention was finally pinned down by his “scientific” analysis. In the early twenty-first century American courts are still struggling in a variety of doctrinal contexts to come to terms with the meaning and implications of the modern elusive concept of the invention. The overt theoretical terminology of the nineteenth century was replaced by doctrinal and normative discourse. The strong experience of the metaphysical nature of the law dissolved as the new scheme of intellectual property became established and as the elements of that scheme became the silent conceptual foundations of the field that are taken for granted. But the basic dilemmas, tensions and indeterminacy generated by the fabricated notion of the invention remained, to a large extent, the same.

FIGURES OF INVENTION examines how the modern notion of the invention and the elaborate conceptual framework woven around it came into being and how it mutated and evolved in the American patent system since its birth in 1790. While in this respect the book is an intellectual-legal history, the authors’ main focus is neither law nor intellectual concepts. Instead, they are mainly preoccupied with what might be called practices of instantiation. These are the ways in which the abstract concept of the invention became real, understandable and accessible in and through everyday practices in the courtroom, the patent office, or the patent lawyer’s office. At the heart of these practices are material media and techniques of representation: texts, drawings, models, deposited biological samples. Indeed, Pottage and Sherman declare, in what should be charitably read as a rhetorical exaggeration, that the “main actors are not people but material modes of representation” (p.17).

It is here, at the methodological core of the work that Derrida (who is never mentioned in the text) enters the picture. This core consists of three basic premises. The first one is that inventions as intangible “objects” are never directly accessible. They always “have to be elicited from material embodiments… through the material features and observable movements to which patent discourse ascribes legal significance” (p.13). The second premise is that these material embodiments are “like texts” in the sense that they always have to be “deciphered, interpreted and ascribed a meaning” (p.13). This interpretive activity is “thoroughly constructive” in that it does not merely uncover meaning but rather creates it. The third one is that patent law and practice as a “medium of communicative action” (p.10) is not a system of straightforward representation in the sense of direct correspondence between “word and world” (p.9). The sign (in this case the
various representations of the invention) does not constitute a straightforward image of its referent (in this case the invention), but rather involves a “risky intermediary pathway” (p.9). All that is accessible to us are “chain[s] of reference” that are “fabrications that make the invention visible and tractable” and in contingent ways “condition how and what appear as the invention” (p.10).

At times Pottage and Sherman state the third premise in ways that could be read as subscribing to an implausible but rather common understanding of one of the main tenets of deconstruction, i.e. the claim that signs are completely self-referential in the sense that they refer only to other signs rather than to anything in the world.¹¹ When, for example, in discussing the role of the patent claim the authors remark that “when interpreters elicit a referent from a text they are not crossing a divide between word and world, they are moving along a chain of reference, between texts and quasi-texts” (p.144),¹² this could be easily read as adopting the complete self-reference view. Its popularity notwithstanding, however, this view is both implausible and based on a misreading of the aphorism that usually serves as its battle-cry “there is nothing outside the text.”¹³ A much more plausible reading of the claim does not deny altogether the relationship of reference between signs and the world, but rather rejects the notion that we can ever have a direct access to the world which is not mediated through signs. While signs (or means of representation) do refer to an external reality the latter is always accessible to us only through the prism of the former, with its mediating effect and its susceptibility to interpretation and reconfiguration.¹⁴ Pottage and Sherman’s methodological stance in the book could and should be read this way. Their observation that “there is nothing beyond a chain of reference“ is only plausible if one emphasizes the crucial qualification in the second half of that sentence: “or at least nothing that can be noticed otherwise than by extending or inflecting the chain” (p.148). The focus of the work is on the means of representation for “fabricating” inventions not because there is nothing outside these means, but rather because inventions are only accessible to us and only acquire their specific meaning through these “figures of invention.”

The substance of the book’s account is a survey of the various modes of fabricating inventions—such as specifications, models, claims, or the deposit of biological samples—as they developed, mutated, and interacted with each other during a period of almost two centuries. The starting point of the survey is a brilliant analysis of the conceptual construct that was the focal point of all the various modes of fabricating inventions during the covered period referred to by the authors as the paradigm of industrial
manufacture. Within this paradigm the invention was imagined as an ideal template from which a potentially endless series of identical material products could be reproduced. The paradigm of industrial manufacture was thus firmly located within the social conditions, both material and ideological, of mass industry producing standardized commodities. Of the various facets of the paradigm of industrial manufacture that the authors carefully draw out three interrelated ones seem particularly important. First, relying on Marx’s analysis of alienation Pottage and Sherman explain how in the new system of manufacturing the process of materially creating artifacts was completely “instrumentalized,” both practically and ideologically. “[N]ew workshop organization, mechanization, and (ultimately) automation” (p.26) transformed the physical process of manufacturing into a series of standardized, monotonous and thoughtless operations and turned the craftsman into a mere laborer. Second, this new sharp distinction between the physical process of fabrication and the underlying design of the product or the invention embodied in it marked a new understanding of “disembodied knowledge,” clearly separated from the process of manufacture or from the skill and person of those taking part in it (pp.22-25). It was at this point that Marx located the appearance of what we call “intellectual property” which he described as the worker being “brought face to face with the intellectual potentialities of the material process of production as the property of another and as a power that rules over him” (p.29). It was also the point at which “invention becomes a business and the application of science to direct production becomes a prospect which determines and solicits it” (p.30). Third, this framework clearly designated ideas or disembodied knowledge as the central and most valuable part of the process of manufacturing. The intellectual original templates, as opposed to the countless physical derivative copies, became the “prime movers” of industry and the most important assets within it (p.20).

Pottage and Sherman see the paradigm of industrial manufacture as lying at the heart of modern patent discourse, but their ultimate interest is in the various ways in which this framework was instantiated through material practices and techniques or in the “specific technical and practical networks that animate the discourse of patent jurisprudence” (p.43). The first significant practice of this kind in modern patent discourse to be analyzed is the specification. The specification or the written description of the invention established at the heart of the field of patents a specific mode of fabricating inventions: it textualized them. From a modern perspective for which the textualization of inventions is taken for granted, it is easy to miss the contingency and importance of this development. The written description first appeared in eighteenth century England, probably at the
initiative of patentees, for reasons that had little to do with the modern theory of the function of the specification.\textsuperscript{15} It was only in the late eighteenth century that courts and then commentators reconceptualized the disclosure in the specification as a crucial element of a “deal” between the public and the patentee, the act that constituted the patentee’s consideration in the form of giving the invention to the public.\textsuperscript{16} American patent law adopted this theory from its inception. The practice, however, was very different from the theory both in Britain and the United States. For most of the nineteenth century, due to a combination of practices, administrative attitudes and rules, the specification was not a readily available document disclosing the invention to any interested member of the public (pp.54-58). During this period the main function of the specification was ideological rather than practical.

While acknowledging the ideological role of the specification during this period as a key component of the official theory (rather than practice) of patents, Pottage and Sherman locate its main significance elsewhere. In their account the crucial effect of the specification was turning the invention into a “thing” and thereby paving the way “for the emergence of the modern concept of invention” (p.59). At the end of the eighteenth century the invention came to be described in patent jurisprudence as the object of property rights. But seen as an idea the invention seemed to many, famously Thomas Jefferson,\textsuperscript{17} as lacking the essential traits of the traditional tangible object of property and therefore as incapable of being subjected to property rights. The problem was thoroughly debated in Britain in the context of copyright and its own intangible object of property—the “work”—in the late eighteenth century litigation and public debate over the question of common law literary property.\textsuperscript{18} Like the literary work, as an abstract idea the invention had no visible or clear boundaries to demarcate an owned object, no markers that could indicate possession or what was being possessed. The specification resolved or at least ameliorated this problem by identifying the invention with a concrete text. It thereby “fostered a practical sense of the invention as something that could be possessed, delimited, or conveyed” (p.59). The key to this effect was “recollection” or reproducibility—the ability to have a stable and concrete perception of the invention from which it could be communicated and reproduced (p.60). This created an analogy to or a partial substitute for the markers of possession and ownership that in the case of tangible objects were expressed in spatial and material ways. In the authors’ words, “reproducibility was a surrogate for materiality” (p.62).
For most of the nineteenth century the specification was neither a reflection of its official role as the patentee’s consideration nor a central element of the specific techniques used for conceptualizing and defining particular inventions. During that period these techniques were dominated by the model rather than the specification. The twofold significance of the specification was located elsewhere. First, as Pottage and Sherman convincingly argue, it played a crucial role in constructing the invention as an object of property, thereby absorbing the conceptual and practical shocks generated by the modern notion of intellectual property. Second, the specification introduced and placed at the center of patent discourse the basic technique of textualizing the intangible. This technique was based on the creation of a separate textual layer that was identified as the invention itself or as capturing it in a form more amenable for the demands and assumptions of property discourse. The significance of this development is illuminated by its contingency. There was nothing necessary or preordained in the appearance of this technique and the assumptions associated with it. This is borne out by the parallel development of other fields of intellectual property, most notably copyright, that never came to rely on similar techniques of textualization.

The next figure of invention covered is the model. Whereas modern eyes tend to see patent models as curious toys or novelty items, relics from bygone simpler times, during most of the nineteenth century the model was the main means for representing and coming to terms with specific inventions. The model dominated the practices of representing the invention to a much greater degree than reflected in the formal legal rules pertaining to it. It played a central role in dealings with the Patent Office, in priority checks, in communication between lawyers and patentees, and especially in litigation. During its heyday it was considered a much more reliable and accurate means for capturing the essence of invention by comparison to text or drawings. In 1867 one judge instructed the jury that “[t]here is nothing, perhaps, more satisfactory upon questions involving the identity of several mechanical structures than the exhibition of the machines or accurate models of them.” An array of connections linked the model to the doctrinal and conceptual frameworks of the time and made it particularly congruent with them. The paradigmatic invention of the period was the machine. Jurists who struggled to conceptualize the patentable essence of inventions came up with a construct they called the “mode of operation” or later the “idea of means.” Robinson described it in his treatise as “the intellectual essence of that artificial method by which the inventor has applied to some determinate end, the natural force.” This inventive essence was understood as revealing itself through observation of the
machine in action, as something that “can ordinarily be perceived and apprehended by the mind... only by observing the powers or qualities of matter, or the laws of physics, developed and put into action by that arrangement of matter.”

Models, as Pottage and Sherman explain, “became an established means for communicating the invention because they were adapted to a form of mechanical knowledge in which machines were apprehended as ‘sensible objects,’ or as visible and manipulable artefacts” (p.87). Models also fitted the modes of claiming inventions and litigating the validity or infringement of patents. The nineteenth century method for determining the scope of patented inventions and of prior art was based on central claiming. This involved describing or demonstrating a core embodiment and then identifying the scope of invention as encompassing any variant substantially similar to it. In litigation juries played an important role in regard to questions of validity, construction and infringement. The model was the perfect media for these conditions. It offered judges and especially jurors a three dimensional visual representation of a core embodiment of the invention that was accessible and comprehensible. It is no wonder that “most patent infringement actions turned on arguments made through the material rhetoric of the model” (p.105).

It was only toward the end of the nineteenth century that the model declined and lost its primacy to the text. Thus in 1879, reversing the earlier hierarchy, the New York Times could comment that the model “may easily be made to show features and principles not embodied in the original invention.” The rise of the status of the text also marked the ascendency of the textual element that today is most associated with the invention: the claims. Contemporary patent lawyers who tend to take for granted the equation of the claims with the protected invention itself may be surprised to learn that although claims were formally required since the 1836 Patent Act, they only acquired this status gradually and relatively recently. The exclusive association of the protected invention with the language of the claims and the modern strict peripheral claiming approach (based on the premise that the claims mark the outer limits of the protected invention) developed in a slow process that extended well into the twentieth century, indeed, probably into the 1970s. Pottage and Sherman chronicle the process in which claims arose to this dominant status, gradually displacing or subordinating not just models but also the specification and drawings. They also provide an illuminating discussion of the set of techniques or craft skills—to which following one early twentieth century manual writer they refer as “claimology” (p.135)—that developed around claims: drafting and construction techniques that simultaneously relied on and created the
new status of claims. Claims and models, the authors argue, are very different ways of representing inventions and of translating them into legal forms. Giving legal meaning to inventions using models operated mainly “within the context of the trial” (p.118) through a relatively free-form or common-sense-based manner in which “the process of translation was always taken up afresh in each case” (p.119). Claims, on the other hand, introduced the invention in trial already coded in legal and highly stylized terms. Litigation arranged around a model (and premised on central claiming) had the form of inquiring after “the ‘real’ nature of the invention” (p.119). With claims that are assertive in nature and already coded in legal forms the central underlying question became “whether a given mechanical feature could bear the legal significance claimed for it by the inventor” (p.119). Claims did not change, of course, the fact that the legal meaning of a mechanical invention was “open to negotiation” (p.119), but they did fundamentally alter the frame and the dynamics of this negotiation.

The last two chapters of FIGURES OF INVENTION are devoted to describing the ways in which the rise and gradual acknowledgment within patent law of categories of inventions markedly different from the paradigm of the machine—at first plants and then other living organisms—challenged both the doctrinal-conceptual assumptions of patent law and the existing modes of fabricating inventions. The framework that developed in the context of patents as “mechanical jurisprudence” did not collapse, but some of its elements came under strain, while others mutated and were adapted to accommodate the new subject matter. Pottage and Sherman identify three main elements composing the modern notion of invention (within the paradigm of the industrial manufacture): origination, description, and reproduction (p.174). The emergence of new biological inventions challenged the first two elements. These challenges were met, at least in part, by rearranging the relationship between the elements and by altering their relative significance. The 1930 Plant Protection Act26 that extended patent-like protection to new asexually reproduced plant varieties exposed the tension between newly emerging categories of invention and the dominant framework. Unlike the context of mechanical innovation, developers of new plant varieties were not inventors in the sense of being originators. They did not originate the invention by creating and putting into practice a preconceived design, but rather captured and stabilized new plant variants produced by nature. Additionally new plant varieties did not easily lend themselves to textualization. The difficulties in adequately reducing such innovations to a written disclosure created tensions both with the formal requirement of enablement and with the established mode of fabricating inventions through texts. On the formal-doctrinal level these
tensions were handled by relegating plant patents to a separate legal regime that, among other things, greatly liberalized the disclosure requirement. The more fundamental ideological challenge triggered a reconsideration of the concept of invention and, ultimately, partial adjustments to it. Most importantly, in order to accommodate plant patents invention was now theoretically framed as being “inductive rather than originating” (p.153). The emphasis shifted from designing and creating a new innovation to identifying and stabilizing mutations found in nature and giving them reproducible form. This rearranged the elements of the industrial manufacture framework. Whereas in the traditional framework the innovative idea preceded and controlled the reproduction, here the reproduction tamed the innovation and captured the idea.

In the second half of the twentieth century and especially after the Supreme Court’s decision in *Diamond v. Chakrabarty* opened the floodgates, biological innovations, no longer confined to a special sui generis regime, entered the mainstream of the patent system. This extended the challenges first precipitated by plant patents. What does it mean to invent a living organism? Where does one draw the line between the “product of nature” and human ingenuity? How are innovations of this kind captured, described, and defined? Pottage and Sherman suggest that the basic conceptual maneuver used to normalize patents in living organisms was based on generalization and analogy. From this perspective biotechnology came to be seen as analogous to mechanical manufacture because it “is the latest variation on the theme of instrumental—or instrumentalizing—technology; just as the mechanical and chemical sciences instrumentalized inanimate nature, so biotechnology instrumentalizes animate nature, and turns organisms into manufactures” (p.181). Accommodation of the new subject matter occurred not just on the conceptual level, but also through the emergence of new techniques for fabricating inventions. Pottage and Sherman highlight in particular two of those techniques. The first is disclosure by way of deposit of biological samples that replaced the traditional emphasis on “intellectual possession” of the invention with “possession of the biological means of (re)production” (p.193). The second is the exploitation within patent practice of new scientific methods for taxonomy and naming codes for organisms for purpose such as drafting claims or analyzing novelty and patentable subject matter questions. The authors diagnose such uses as a new figure of invention that they name the “composite biological-textual representation” (p.200). Drawing on the book’s theme of construction of the invention through interlocking chains of representation, they explain that the two techniques and others combined to fabricate the biological invention: “[t]he material deposit, the written
descriptions of its competences (in the patent text and in the patent literature), the taxonomic data associated with the deposit, the claims of the patent, evidence of the state of the art—all constitute the elements of an operation of ‘induction between particulars’ from which the form of the biological invention emerges” (p.206).

Together these chapters form a fascinating journey through the ways in which the metaphysical emerged from the everyday, mundane practices of patent law. The picture, as the authors recognize (p.18), is incomplete. One suspects that interesting variants of the story could be told about the development of the various ways of fabricating inventions in the chemical, electrical, and informational fields, as well as about what is known in the U.S. as “business method patents.” Nevertheless, the work offers an insightful analysis of a broad swath of subfields of invention, undertaken from an original perspective that is largely unexplored in the patent history literature. What else could one ask for? Naturally, the answer is: “more.”

The remarks that follow suggest some relative weaknesses of the work, but they are mainly aimed at offering some lines of inquiry along which the implications and significance of the current account could be further explored.

One somewhat disappointing aspect of FIGURES OF INVENTION is the extent to which it is not written as “history from below.”28 The term has multiple meanings in historiographical usage, but as used here it means an historical account which is empirically grounded in the actual practices and experiences of historical actors and which relies on sources that are relatively close to those experiences. The book relies mainly on formal legal sources such as reported appellate court opinions, legal treatises, and patent manuals and guides that are several times removed from the actual practical experiences of most relevant actors. Admittedly, the authors extract an impressive amount of data from the “traces” left in those documents, but the account based on them is by necessity still remote from being a rich empirical reconstruction of actual practices. To be sure, this is easier said than done.29 Moreover, since one can only do so much in one work, a more history from below perspective might have required compromising one of the book’s valuable features—its broad sweep. Still, given the authors’ strong methodological emphasis on social practices and on the ways that material media functioned in actual activities of historical actors, it is noticeable that the work does not include much by way of thick description of such elements. What exactly did patent lawyers, patent examiners, and patentees do during the various stages of the life of a patent? How exactly did the figures of invention surveyed operate and how were
they used in the courtroom setting or in lawyer-client communication? Was the development of modes of representing invention shaped by the fact that, according to some accounts, around the 1860s a single law firm prosecuted about a third of the patents issued in the U.S.?30 To put the point more constructively, FIGURES OF INVENTION could be seen as a brilliant but still rather abstract and speculative framework for understanding historical patent practices; a framework that ideally should be filled with more concrete content (and inevitably be reinterpreted along the way) by narrower, and more empirically attuned future studies.

Another issue which merits more consideration is the comparison of the history of the representation and fabrication of invention with the parallel processes in other fields of intellectual property that were haunted by the same fundamental difficulty of conceptualizing and instantiating the intangible. A case in point is patent law’s not quite identical twin: the field of copyright. Initially, it is tempting to draw a categorical distinction between the two fields. Unlike patents, in copyright—especially copyright in books that were the paradigmatic subject matter of the early nineteenth century—the intangible object of property is already given in a relatively stable and concrete form of a text.31 It follows, perhaps, that in copyright there was less of an urgent need for creating additional layers of representing and fabricating the object of protection. This line of reasoning is faulty, however, because copyright, whether it applies to texts or—as began to happen in the second half of the nineteenth century—to other non-textual subject matter, involves its own constructed and elusive object of property: the work.32 Just as the machine is only a specific embodiment of a more abstract constructed entity that is seen as the real object of patent protection, the text of a literary work or the material form of a photograph is seen as one specific embodiment of a broader abstract object known as the work to which copyright applies. Indeed, the elaborate nineteenth century theorization of intellectual property as ownership of an abstract intangible essence that could be manifested in many different concrete forms appeared simultaneously in patent and copyright jurisprudence.33 Just as the invention can only be reached through chains of fabrication, access to the work always requires some mediating representational media. Although perhaps not as readily apparent, such means of fabrication are just as pervasive in copyright practice as they are in the patent context. Consider, for example, the master in chancery report that was a standard tool in nineteenth century copyright litigation in equity,34 expert opinions and their various textual and non-textual techniques for dissecting and representing creative works, and legal arguments that construct through language works,
such as the “James Bond character”\textsuperscript{35} or the “Harry Potter world,”\textsuperscript{36} that are only manifested in a group of specific novels and films taken together.

Copyright, in short, is based on means and techniques of fabrication, every bit as much as patent law, but not on the same means and techniques. One significant difference is that, contrary to patent law, copyright never developed a stable practice of a formalized textual layer regulated by specific rules and conventions that is taken to be a full description and demarcation of the intangible object of property. The point is twofold. First, there is a need for an historical account parallel to that of FIGURES OF INVENTION in the field of copyright. Second, some complex comparative questions arise. Given the ongoing struggle within the two fields with the same representational difficulties and the joint conceptual framework that assumes an intangible object of property, what accounts for the very different techniques of fabrication that developed within them? Is there something “really” there in the nature of the typical subject matter of the two fields that makes each amenable to different modes of representation? Perhaps it could be argued that, given the subject matter of copyright, works could relatively easily be constructed through direct sensual experience of a concrete embodiment thereby making such direct experience the center around which other fabrication techniques are usually deployed. In the context of technological innovation, the argument would go, it is harder for most people to construct inventions on the basis of direct experience of specific technological embodiments and therefore fabrication techniques tend to revolve around separate layers of representation such as the text of claims and the specification. Alternatively, are the different modes of representation in the two fields simply the outcome of historical contingencies and path dependencies, of the fact that in certain moments in the timeline certain techniques were more readily available or simply accidentally got entrenched? Does the correct account combine, perhaps, elements of those two different explanations?

Last to be discussed here but not least in importance is the question of the significance of the changing patterns of fabricating inventions uncovered by FIGURES OF INVENTION. Why, if at all, did it matter that in different periods different figures of invention became dominant? Are these techniques of representation “just a language” in the colloquial sense that any speaker, as long as she masters the relevant forms and conventions, can convey the same content or make the same arguments equally effectively within each mode of representation? Alternatively, these techniques may be like language in the sense associated with the term since the linguistic turn, that is, language as constitutive of reality, as organizing and constraining
through its internal unique forms, structures and relations the very ways in which speakers understand and experience reality.\textsuperscript{37} From this perspective the shift from one mode of representation to another matters greatly because it affects and constrains the meaning of what is being represented. The authors’ recurrent denial that one could have access to the reality of inventions in a way which is unmediated by chains of representation suggests that their sympathy lies with the latter alternative. The book, however, never offers an account of the concrete effects created by the mediation of invention through different modes of representation or of how those effects were created. Ultimately this is a variant of the old unresolved question in critical legal history of tilt or legitimation.\textsuperscript{38} Is it the case that frameworks of legal arguments or concepts may have a constraining or constitutive effect, in the sense of privileging or legitimizing certain substantive options and marginalizing others? If so how does this effect come into being? FIGURES OF INVENTION raises similar questions about the legal practices of fabricating inventions. An elaborate account of the consequences of changing practices of fabricating inventions, if feasible, could connect these changes to social effects. Were certain subject matter areas more likely to be seen as naturally suitable for patent protection under a particular mode of representation? Did practices of constructing invention help to mold assumptions about the appropriate scope or shape of patents? Most importantly, were the legal practices merely after the fact practical-ideological reflections of changes determined by other social forces (e.g. plant patents were introduced and the legal forms and practices were adjusted to that change), or did they play some active causal role in facilitating some outcomes and resisting others? FIGURES OF INVENTION contains some interesting hints, but not a clear and elaborate attempt to answer these questions.

That FIGURES OF INVENTION gives rise to these fascinating questions, even if it does not adequately answer them, is a testament to the quality and depth of the work.

ENDNOTES

\begin{enumerate}
\item Barrett v. Hall, 2 F. Cas. 914, 923 (C.C.D.Mass. 1818).
\item Jacques Derrida, OF GRAMMATOLOGY 163 (The Johns Hopkins University Press, 1976).
\item Pamela O. Long, OPENNESS, SECRECY, AUTHORSHIP: TECHNICAL ARTS AND THE CULTURE OF KNOWLEDGE FROM
\end{enumerate}


7 44 Westminster Review 459 (1835).

8 See e.g. Barrett v. Hall, 2 F. Cas. 923; Willard Phillips, THE LAW OF PATENTS FOR INVENTIONS 96 (1837); 1 William C. Robinson, LAW OF PATENTS FOR USEFUL INVENTIONS 192 (1890).

9 Robinson, supra note 8, at 114.

10 The themes of deconstruction are injected into the work indirectly through the authors’ reliance on a strand of the sociology of science literature that appears to draw heavily from that body of thought.

11 For a critical reference to this common view see James K. A. Smith, JACQUES DERRIDA: LIVE THEORY 44 (Continuum, 2005); Duncan Kennedy, A Semiotic of Legal Argument, 45 Syracuse L. Rev. 75, 108 (1991).

12 See also p. 144. (“the axis along which meaning emerges is the ‘lateral’ axis that relays word to word, text to text, rather than a ‘vertical’ relation of text to thing”).

13 Famously, Derrida firmly rejected the reading of his claim that there is nothing outside the text as denying the existence of a non-textual reality. See JACQUES DERRIDA, LIMITED INC. 136 (Northwestern University Press, 1977).

14 See Smith, supra note 11, at 44-45; Colin Wight, Limited Incorporation or Sleeping With The Enemy: Reading Derrida as a Critical Realist, in REALISM DISCOURSE AND DECONSTRUCTION (Jonathan Joseph, John Michael Roberts eds., Routledge, 2004), at 206-208; Quentin Kraft,


20 Robinson, supra note 8, at 199.

21 George Ticknor Curtis, A TREATISE ON THE LAW OF PATENTS FOR USEFUL INVENTIONS IN THE UNITED STATES OF AMERICA, at xxviii-xxix (1849).


Golden, supra note 22, at 349.


Especially when it is said by a reviewer much of whose work is a rather abstract conceptual history of intellectual property that relies on much the same kind of sources as FIGURES OF INVENTION.

Kenneth W. Dobyns, THE PATENT OFFICE PONY: A HISTORY OF THE EARLY PATENT OFFICE 129 (Sergeant Kirkland’s Press, 1997). According to the author this law firm was Munn & Co.

For a similar, although not identical, argument see Mario Biagioli, Patent Republic: Representing Inventions, Constructing Rights and Authors, 73 Social Research 1129, 1144 (2006) (in copyright “[t]he law simply recast the author function of certain kinds of texts that already existed” while in patents “the law did not reinterpret the text as being authorial but rather mandated the production of a new kind of text, and by doing so, constructed the inventor as an author”).

Indeed Brad Sherman has recently began analyzing the “work,” though not its history, in terms equivalent to those applied to inventions in FIGURES OF INVENTION. See Brad Sherman, What Is a Copyright Work?, 12 Theoretical Inquiries in Law 99 (2011).

See generally Bracha, supra note 6.

For a detailed description of the master’s report in one seminal nineteenth century copyright case—Folsom v. Marsh—see R. Anthony Reese, The Story of Folsom v. Marsh: Distinguishing between Infringing and Legitimate Uses (Copyright), in INTELLECTUAL PROPERTY STORIES
(Jane C. Ginsburg and Rochelle Cooper Dreyfuss eds., Foundation Press, 2006), at 275-77.


37 For some classic early versions of this position see Ferdinand De Saussure, COURSE IN GENERAL LINGUISTICS (Charles Bally et al. eds., Open Court, 1986); Benjamin Lee Whorf, LANGUAGE THOUGHT AND REALITY: SELECTED WRITINGS OF BENJAMIN LEE WHORF (J. Carroll ed., Technology Press of Massachusetts Institute of Technology, 1956); Edward Sapir, SELECTED WRITINGS IN LANGUAGE CULTURE AND PERSONALITY (David G. Mandelbaum ed., University of California Press, 1949).


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