

**2010 Wisconsin Law Review Symposium:
Intergenerational Equity and Intellectual Property
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ABSTRACTS

Matthew Adler

University of Pennsylvania Law School

“Intergenerational Equity: Puzzles for Welfarists”

This presentation will survey the issue of intergenerational equity from the perspective of welfarism- the normative framework undergirding welfare economics, and one also employed in much philosophical work on future generations, such as Derek Parfit's path-breaking analysis in *Reasons and Persons*. Welfarism circumvents certain puzzles, regarding intergenerational equity, that arise within nonwelfarist frameworks -- for example, the Rawlsian puzzle of explaining how different generations can stand in a relation of reciprocity. But it gives rise to others: non-identity problems, variable population puzzles, infinite futures, and the specification of the discount rate.

Keith Aoki

UC Davis School of Law

“Food Forethought: Intergenerational Equity and Global Food Supply -- Past, Present and Future”

U.S. agricultural policy may no longer be discussed separately from drastic changes in the global food supply. Over the past two decades, there have been major, transformative shifts occurring in the structure of the agricultural sector that affects the long-term sustainability of the global food system. Many of these changes have been driven by shortsighted market forces that possess a notable democracy deficit, giving rise to striking levels of oligopoly at every level of the food system from distribution of seeds to the produce sold at the local supermarket.

This paper examines two related phenomena in the context of GMOs. The first is "public" and the second is "private."

The first phenomenon is regulatory fragmentation. This fragmentation occurs on at the national and subnational level in the U.S., as well as fragmentation at the supranational level. This fragmentation gives rise to what William Buzbee calls a “regulatory anti-commons” where important policy issues fall through the cracks of the administrative system because jurisdiction is splintered. In the context of GMOs in the U.S., there is severe regulatory fragmentation of jurisdiction between the EPA, USDA and the FDA, as well as between the states and the federal government, and between local governments and the states. The result is that for the most part, GMOs have been incompletely regulated. A recent example is the USDA-approved GMO bent grass field at an EPA lab in Oregon that have cross-pollinated with non-GMO grass varieties in the region.

The second phenomenon involves ways that the global food production system has undergone drastic restructuring. Horizontal integration, vertical integration and globalization have produced an emerging global food system that is marked by a small number of dominant firms that have developed relationships with a few other firms in the global food system, giving rise to “food clusters.” These relationships are the results of joint ventures, mergers and acquisitions, partnerships and other agreements.

Three food system clusters are emerging in the global food system. These consist of firms in life sciences, chemical and food processing and retailing sectors. Life science and chemical firms such as Pharmacia (Monsanto) Dow (Mycogen) and DuPont (Pioneer) and Zeneca have been engaging in joint ventures and mergers and have grabbed increasing dominance in the seed, pesticide, insecticide and fertilizer sector, offering integrated industrial agricultural technology systems (including GMO crops) to

farmers. The produce from these crops are used to feed commodity animals and the second cluster consists of firms engaging in food processing such as ADM, Cargill and ConAgra, as well as meat processors such as Tyson, Smithfield, and Cargill. The third food cluster involves food retailing where the top five global food retailers are (in order): Wal-Mart (US), Carrefour (France), Royal Ahold (Netherlands), Kroger (US), and Metro (Germany).

This increasing concentration of ownership and control by a few firms is currently most notable in the processing stage of food production of particular crop and meat commodities, but are also becoming evident in the seed and retailing sectors as well. Three trends are exemplary: horizontal concentration, vertical concentration and globalization.

In terms of horizontal concentration in the U.S., the four largest meat-processing firms slaughter 80% of beef cattle, 57% of hogs and 50% of broiler chickens. The four largest crop processing firms process between 57% to 76% of the corn, wheat and soybeans. Antitrust scholarship suggests that when four firms control 40% or more of any market, those firms may exert undue influence on the market unlike that in a competitive system. Firms such as Cargill, ADM, ConAgra appear again and again on lists of processors of meat and crop commodities. Since the turn of the century, as mentioned above, the retail food sector has become much more concentrated where the largest ten firms control more than half the retail market.

A second trend has been vertical integration in the food system that joins two or more stages in the food system. ConAgra is one of the dominant producers of agrochemical inputs (pesticides, insecticides and fertilizers) in North America. ConAgra also has several joint ventures with Dupont that owns Pioneer Hi-Bred, a major seed producer. ConAgra manufactures animal feed, and produces and processes chicken broilers, as well as being the second largest food processor in the U.S. ConAgra's vertical concentration, rather than being the exception, is increasing becoming the rule in the food system.

The third trend is the tendency of firms to expand beyond national borders and integrating into the global, industrial agricultural food system. ADR's motto, "Supermarket to the World," unselfconsciously refers to the global reach of a few giant food production firms. The food systems of individual nations have become so integrated via the web of agreements between transnational corporations that one has a difficult time speaking in of the food system of an individual nation in isolation.

The rapid introduction of biotechnology and patent rights in plant germplasm (GMO seeds) exacerbates these trends. One notable characteristic of the past decade has been the limitation of competition on the input side in food industry sectors. In the case of patented seeds, lack of competition is underwritten by state-backed patent grants. Those firms with patented plant germplasm and other agricultural technology systems have become dominant players and have partnered in various configurations with other major players in the processing and retailing segments, giving rise to an emerging fully-integrated food system that controls food from the gene to the seed to feed to the supermarket shelf. Because of the dense network of partnerships and alliances up and down the food production and distribution chain, there are no "real" markets" and the only time that any input into the food system is public information is at the retail supermarket level.

In a vertically concentrated food system cluster, the "product" is moved from stage to stage but the decision makers don't change and ownership of the product doesn't shift either. The food from gene to seed remains the intellectual property of a cluster of interrelated firms. Farmers become a grower/licensee without clear title to the crops they produce, with little or no input into decisions affecting the food system.

This paper analyzes these two phenomena, arguing that our current domestic and international administrative mechanisms are inadequate to address the effects of such concentration. This articles makes three points.

First, the current fragmentation of domestic U.S. regulatory authority creates a situation where no particular administrative agency possesses meaningful oversight over GMOs. In the absence of a single

regulatory bottleneck for approval of GMOs, there is in reality no meaningful oversight. Specifically, the interaction between different regulatory standards, such as the FDA "substantial equivalence" standard (that allows GMOs if the GMO proponent asserts that they are nutritionally "equivalent" to non-GMO varieties) is in contrast with the European Union's "precautionary principle" (burden is on the advocate to show that GMOs are nonhazardous - a U.S. version of the "precautionary principle" is used by the FDA when granting approval for new pharmaceuticals for human use) creates an overly decentralized and chaotic regulatory environment permitting GMOs without adequate testing or safeguards - a regulatory anticommens. To further exacerbate this, state and local governments weigh in with inconsistent and sometimes contradictory regulatory jurisdictions over different aspects of GMOs.

Second, the substantively lax notice and comment procedures of the Administrative Procedure Act (APA) allow federal agencies with partial jurisdiction over GMOs to essentially ignore public comments on the adoption of rules governing GMOs. Under informal rulemaking procedures, the APA provides only that a proposed rule be published in the federal register and that concerned persons may submit written comments to the relevant agency (with no onus on the agency to respond or incorporate such comments). An example of this is the USDA Animal and Plant Health Inspection Service's (APHIS) notice and comment proceedings concerning allowing field tests of GMO bent grass in 2005. Thousands of comments opposing such field tests were received, yet the USDA allowed such tests to proceed. Requiring federal agencies to substantively respond to comments received in pending informal rulemaking proceedings may be a small, but important step in bringing a more thorough vetting of industry applications to field test and bring to market additional GMO applications. However, given the current U.S. regulatory deference to the applications of GMO firms, such changes may have little effect.

Third, this article notes the need for a transnational antitrust/competition law to address problems of vertical and horizontal concentration occurring in the global food system. Principles drawn from EU competition law and U.S. antitrust law may be helpful in structuring a "public" international regulatory solution. Such a solution has a limited precedent in the 2001 International Treaty for Plant Genetic Resources for Food and Agriculture (ITPGR), wherein a (partial) multilateral solution was reached regarding preservation of plant genetic diversity in the face of the expanding scope of intellectual property rights in crop plants.

Harry Brighouse

University of Wisconsin

"Who Really Owns the Research Produced by Elite Research Universities?"

Elite research universities play two major roles in society: the education of elites and sub-elites and of future college teachers, and the production of research and researchers. There's no reason in logic for the same institution to perform both these functions, but that's the way things have evolved. The educational role involves elite universities in allocating scarce opportunities to take advantage of the high rewards that flow to members of the elites and sub-elites in an unjustly unequal society. They use substantial public money to this end, and tend to allocate those opportunities to young people who come from already-advantaged backgrounds. They also produce research using significant amounts of public money in the form both of direct subsidies and indirect subsidies through the subsidisation of tuition and of the k-12 and beyond education of most researchers. The educative function of the university involves collusion in an unjust process whereby public subsidies are provided to enable young people who are, through no merit of their own, already advantaged, to ascend to the unjustly large rewards provided to elites in an unjustly unequal society. Most high status researchers also participate in the educative mission.

So who owns the products of the research? I shall argue that they are, morally, public property, not in the sense that the public has moral discretion over their disposal, but in the sense that the public has a right to expect them to be turned to legitimate public purposes. The researchers are embedded within institutions that collude in injustice, and they take the benefits those institutions provide. They have no moral claim on ownership of the research they produce, and they bear a moral obligation to

direct their efforts to legitimate public ends. This does not mean that universities should never grant legal ownership of this research to researchers -- whether they should do so depends on what overall regime of allocation of ownership is most likely to produce research that serves public ends (whatever regime that is -- I am no expert!). But it does imply that researchers should be cautious about what they demand, and about how they use the privileges that university employment confers on them.

Margaret Chon

Seattle University School of Law

“Tacit Knowledge in Education, Intellectual Property and Intergenerational Equity”

Tacit knowledge systems may in fact constitute the much larger body of knowledge than we usually acknowledge in intellectual property, and may intersect with intellectual property, including copyright, in unexpected ways. As Paul David and Dominique Foray have noted, “while the cost of replicating information amounts to no more than the price of making copies (i.e. next to nothing thanks to modern technology), reproducing knowledge is a far more expensive process because some, indeed many, cognitive capabilities are not easy to articulate explicitly or to transfer to others. There are elements that therefore remain ‘tacit’: ‘we know more than we can say’ (Polanyi, 1967). Knowledge reproduction has, therefore, long hinged on the ‘master–apprentice’ system (where a young person’s capacity is moulded by watching, listening and imitating) or on interpersonal transactions among members of the same profession or community of practice. These means of reproducing knowledge may remain at the heart of many professions and traditions, *but they can easily fail to operate when social ties unravel . . .*” Thus a significant liminal area within global intellectual property is between tacit and codified knowledge systems, which has been explored within patent law but less so within copyright. Understanding the reach of tacit knowledge may point to the means to encourage knowledge reproduction and dissemination where that knowledge is typically difficult to collate, demonstrate, gather and/or pass on to others. Education, ironically, is one of those latter realms.

Where will tacit knowledge—due to its impact on unraveling social ties, incommensurate cultural norms and/or consistently inattentive institutions—prevent the emergence of robust governance mechanisms through and within intellectual property laws, including copyright?

Conversely, where will hybrid cultural and legal forms truly emerge through acknowledgement, recognition, movement and fusion of local and global governance norms? This paper will attempt to tease out the various ways in which tacit knowledge has played (underacknowledged) roles in these processes.

Seth Cluett

Miami University of Ohio

“A Corked Bottle of Air: Archival Problematics of the Documentation of Sound and Multimedia”

A true documentation of events has always been difficult to achieve. Throughout history, the narrative of important events has been constructed through an assemblage of primary sources in the form of moving and still images, letters, scores, sound recordings, and production documents. The historical work is made all the more complete through secondary sources of all kinds ranging from announcements and reviews to audience accounts and press documentation. Works of art and music that take the form of multi-media are of course not new, but as they are produced more and more through technology in the form of hardware and code, coordinated through email and texting, and reviewed on the internet and television, a host of new problems arise for both the archivist and historian. These contemporary artistic productions, subject to the ephemerality of the media with which they are produced and by which they are documented, provide a provocative case study for the care and continuance of the cultural history of our society. In this paper, I hope to introduce the core technical and critical issues at work regarding ephemeral media and discuss possible steps for concretizing these works so that they may be (re)produced for future audiences and (re)presented for our physical libraries and future historians.

Julie E. Cohen
Georgetown University Law Center
“Copyright as Post-Industrial Policy”

The statement that the purpose of copyright is to furnish incentives to authors has attained the status of a rote incantation. It is so deeply ingrained in our discourse and our thought processes that it is astonishingly hard to avoid invoking. Yet avoiding the incentives justification for copyright is exactly what we ought to be doing. In fact, copyright has very little to do with providing incentives for authors to do creative work, and to talk about it as though it does is very bad for copyright policy. Creative people are happy to receive copyright protection for their work, and we ought to reward them for doing it, but copyright isn't why they do the work in the first place. The purpose of copyright is, instead, to enable the provision of capital and organization so that creative work may be exploited. Put differently, copyright is about the proper (post-)industrial policy for the so-called creative industries.

Taking seriously the idea of copyright as industrial policy suggests some different legal analogies. Copyright scholars have pursued explanations for copyright's fundamental truths in the core common law realms of property, contract, and tort. In other words, we have chosen to think about copyright using the doctrinal tools of the preindustrial property system. This ignores a crucial stage in property law's history. The postindustrial, information age economy in which we live didn't emerge directly from the preindustrial economy of property in land. Industrial property – corporate property – came first. The law of the preindustrial property system couldn't respond to the needs of the industrial age, so the law evolved by developing formal mechanisms for aggregating assets and separating ownership from control so things could get done. Title 17 of the US Code is the Delaware law of the post-industrial property system; it separates authorship from control of creative works so that certain kinds of coordination problems can be solved.

The corporate law analogy foregrounds two kinds of agency problems that have been difficult to assimilate within the framework of copyright theory. One is the problem of the relationship between artists and intermediaries, which can be conceptualized as a variation on the more general relationship between managers and shareholders. The second is the problem of the relationship between the creative industries and the public, which can be conceptualized as a variation on the more general relationship between corporate entities that generate external harms and societies that experience those harms and must devise ways of valuing and accounting for them.

Peter Decherney
University of Pennsylvania
“How the Auteur Theory Changed Copyright Law”

Every so often, an aesthetic theory becomes so popular that it has a direct impact on popular discourse, industry, and even legislation. It is well established, for instance, that in the 1960s and 1970s the auteur theory began to fill newspapers columns, and it contributed to the transformation of the Hollywood studio system. I argue in my paper that the auteur theory also led to an attendant transformation of the legal treatment of Hollywood filmmakers—a transformation that still governs the circulation of media work.

The early Hollywood studio system created a class of filmmakers who were celebrated as original artists but who did not own the rights to their work. As early as the 1920s, some of these filmmakers used copyright lawsuits to attempt to save their work from the hands of corporate editors, who were instructed to reedit films for distribution to new markets. The situation became more intense after studios started to release films to be aired on television in the 1950s. Actors and directors including Douglas Fairbanks, Roy Rogers, George Stevens, and Otto Preminger fought to preserve the integrity of their work from “mutilating” and “emasculating” edited versions (as some court decisions read). In other words, filmmakers asked for the equivalent of moral rights. Their plight garnered some surprising concessions in legal decisions and at Congressional hearings, but, in the end, filmmakers were consistently denied the right to prevent their films from being shown in reedited or truncated form.

The situation changed after the popularization of the auteur theory in U.S. Hollywood directors gained increased commercial and artistic control, and, at the same time, the studios became part of diversified conglomerates. These parent corporations placed a larger emphasis on ancillary markets, including television, home video, and product tie-ins. As they had for decades, directors used lawsuits, contracts, and lobbying to challenge studios' reuse of their material in new media markets. But, unlike in the past, filmmakers began to prevail in their standoffs with the studios. Directors from Steven Spielberg and George Lucas to Terry Gilliam and Steven Soderbergh successfully used the language of auteurism and moral rights to protect their work from being altered for use in new media markets.

My paper, first, demonstrates that auteurism led to the changes in the legal definition of the media artists. I then argue that this new definition has affected the current media environment in several ways. It has limited the parameters for artistic expression, it has hampered the development of new media technologies, and, ironically, it has begun to emerge as a legal tool for the very same Hollywood studios that fought against the expansion of filmmakers' rights throughout most of the 20th century.

Anuj Desai

University of Wisconsin

“Legal Traditionalism, Creative Destruction, and the Role of Media Law in the Intergenerational Social Contract”

The intergenerational social contract contains what David Luban has called a “preservation” clause and an “innovation” clause. Virtually every question involving that contract must grapple with the tension between these two competing clauses. When Edmund Burke wrote of the “great primeval contract of eternal society,” he was speaking primarily of the “preservation” clause. When Joseph Schumpeter argued that capitalism contains within itself the revolutionary process of “creative destruction,” he was implicitly speaking of the “innovation” clause. In this article, I use media law cases to illustrate the tension between Burke and Schumpeter and the way in which law at times preserves established media institutions and at times furthers media innovation, both in service of the intergenerational social contract.

Deven Desai

Google Inc.

“The Life and Death of Copyright”

Copyright law operates with a hidden assumption: that copyright after death is the same as copyright during life. In the United States, the duration of copyright is the author's life plus seventy years. In debates over copyright's duration, those in favor of longer terms and even those in favor of shorter ones have treated pre and post death copyright as equal. The law, as well as the current discourse about copyright, merely focuses on time. In this article, Professor Deven Desai critiques the post-mortem assumption—that the consequences of copyright protection during the creator's life are the same as after the creator's death. He contends that the law must look beyond merely the span of time of copyright protection and that copyright's extension after the author's death is unjustifiable. He explores the historical, philosophical, and economic justifications for copyright after death and concludes that it should not matter in copyright policy.

Edward W. Felten

Princeton University

“Software Copyright, DRM, and Intergenerational Equity”

This talk will explore two intergenerational equity issues at the intersection of copyright and digital technologies. First, lengthy copyright terms cause copyrighted software to be withheld from the public domain long after the software's commercial value has been extracted, thus withholding important economic and cultural artifacts from study after any economic rationale for copyright has expired. Second, Digital Rights Management (DRM) technologies privilege current copyright owners and some technology makers, at the cost of frustrating future efforts to use works.

William W. Fisher III (Terry)

Harvard Law School

“The Intersection of Intergenerational and International Equity: Developing Drugs for Developing Countries”

Several of the legal reforms that have been proposed to improve the ways in which we develop and distribute pharmaceutical products that address diseases common in developing countries rely upon the DALY or QALY metrics for measuring health-care improvements. Those metrics incorporate important assumptions concerning how health impacts in different cultural and economic settings and across generations should be compared. Are those assumptions defensible? If not, what metric would provide us better guidance when modifying (or displacing) the intellectual-property rules that affect drug development and distribution?

Brett M. Frischmann

Cardozo Law School

“Intergenerational Progress” (coauthored with Mark McKenna University of Notre Dame Law School)

The Intellectual Property Clause of the U.S. constitution identifies “progress” as the ends served by “exclusive rights to writings and discoveries.” We have tended to conceive of progress in essentially utilitarian terms, seeking more and better inventions and works of authorship. As a result, intellectual property law as the means to achieving progress is always linked to a market.

Exclusive rights matter, and “promote the progress of science and the useful arts,” primarily when there is a market in which the rights holders can exploit the rights. But “progress” is a vague term, capable of being measured in a variety of ways. We argue that progress should be defined in part in terms of how well legal rules build the capacities of future generations, and that the inherent short-sightedness of the market necessarily makes IP less future-regarding than it could be. This is particularly disappointing because the subject matter of IP makes it particularly susceptible of leveraging for the benefit of future generations. Unlike tangible assets, works of authorship and inventions can be consumed non-rivalrously and can be used as productive inputs for a wide range of additional works. The subject-matter of IP, then, could be leveraged much more effectively to build capacities of future generations.

In this essay we suggest at a high level of generality a number of ways policymakers could address this short-sightedness and better account for future generations. First, IP law itself could make more space for productive use of intellectual assets, shortening terms of protection, or otherwise limiting the reach of IP. Second, given that IP protection is going to play a role in promoting innovation, the shortsightedness likely embedded within that system suggests that policy makers ought to be more future-regarding in the other policies they adopt in conjunction with IP protection - for example, in funding university and non-profit infrastructure and awarding grants for basic research.

Jay Kesan

University of Illinois College of Law

Title TBA

Margaret Jane Radin

University of Michigan Law School

“Property Longa, Vita Brevis: Conundrums of Intergenerational Justice”

Property outlasts human beings. Thus property, at least in Western legal systems, has always given rise to issues of intergenerational justice, however dimly grasped (remember “dead hand control,” the Rule Against Perpetuities, etc). As this conference will show, intellectual property systems also harbor issues of intergenerational justice. Intergenerational issues arise from the length of the copyright term almost by definition (life of author, *plus*), and they are made more difficult because of the scope of the derivative work right, and the difficulties in locating copyright holders of many older works. Patent too gives rise to intergenerational issues, whether we are talking about “generations” in the sense of innovative breakthroughs, or generations of actual human beings. In particular, controversy arises over patenting of traditional medicines or other items that can be considered cultural property.

Attempts to apply theories of justice to such issues face serious philosophical conundrums. At the root of one set of major conundrums is the methodological individualism of liberal political theories. Such theories are still deeply embedded in the legal systems of developed democracies, notwithstanding attempts of theorists to move beyond them. Liberal theories tend to focus on individuals who are alive today, so that trying to conceptualize intergenerational justice within these systems, while perhaps not impossible, is an awkward task. Rights theories tend to depend on the existence of rights holders; contractalist theories tend to depend on the existence of contractors; welfare theories tend to depend on the existence of beings whose welfare can (at least in theory) be summed. These central commitments of liberal theories, even if philosophical “kluges” can be invented to get around them, tend to make questions of intergenerational justice at best very troubled, with little consensus about how the difficulties can be surmounted.

At least in the US, theories justifying propertization of knowledge, creation and information rely heavily on normative economics (utilitarianism). Theories of justice that depend on maximizing aggregate welfare are especially difficult to apply intergenerationally, either to past or to future people. Consequentialism tends to make the welfare of past people irrelevant, even if one could imagine how to apply a summation procedure to past people. (Yes, the utilitarian can start thinking about the effect on our own welfare of injustices done to past people, but that may evade the question of intergenerational justice.) Consequentialism is better suited to considering the future. But trying to arrive at a procedure for considering the aggregate welfare of unknown future people, of unknown numbers and with unknown situations, together with a procedure for trading off that aggregate welfare against the aggregate welfare of today, may well be a task that is beyond us.

Given the lingering commitment in practice to premises of liberal theory—not to mention the current non-ideal circumstances of territorialism plus current wealth and power distribution—it does not seem satisfactory to say that all we need to do is transcend liberal theories. It’s one thing to have intuitions of inequity in specific cases, and it’s another thing to fit them into a satisfactory theory of justice. Problems posed by intellectual property systems should push us from intuition to justification, and the process of attending to problems specific to these systems may function to improve theories of justification.

Pamela Samuelson

University of California, Berkeley School of Law / Boalt Hall

“The Google Book Settlement As Copyright Reform”

An intriguing way to view the proposed settlement of the copyright litigation over the Google Book Search (GBS) Project is as a mechanism through which to achieve copyright reform that Congress has not yet and may never be willing to do. The settlement would, in effect, give Google a compulsory license to commercialize millions of out-of-print books, including those that are “orphans” (that is, books whose rights holders cannot readily be located), establish a revenue-sharing arrangement as to these books, authorize the creation of an institutional subscription database that would be licensed to libraries and other entities, resolve disputes between authors and publishers over who owns copyrights in electronic versions of their books, provide a safe harbor for Google for any mistakes it might make in good faith as to whether books are in the public domain or incopyright, and immunize libraries from secondary liability for providing books to Google for GBS, among other things.

This Article explains why certain features of U.S. law, particularly copyright law, may have contributed to Google’s willingness to undertake the GBS project in the first place and later to its motivation to settle the *Authors Guild* lawsuit. It then demonstrates that the proposed settlement would indeed achieve a measure of copyright reform that Congress would find difficult to accomplish. Some of this reform may be in the public interest. It also considers whether the quasilegislative nature of the GBS settlement is merely an interesting side effect of the agreement or an additional reason in favor or against approval of this settlement.

Kara Swanson

Northeastern University School of Law

“Knowing, Seeing and Secrecy - Food and Drugs at the Turn of the 20th Century”

This paper explores the IP controversies that arose when a stark question of intergenerational equity was posed: would the next generation survive the food it was fed and the medicines with which it was dosed? I focus on the turn of the 20th century, when the two topics of this panel, health and food, became linked together in a search for purity in consumer goods. The first federal Pure Food and Drug Act passed in 1906 in the glow of Progressive Era faith in science to better society.

It was secrecy that was directly threatening the next generation. Americans were ingesting unknown substances in their food and medicines, and their inability to distinguish the pure from the impure was causing them to waste their money and to endanger themselves and their children. New ways of seeing through science created new knowledges about food and drugs. Analytic chemistry and modern research science offered tools to ask and answer questions about purity, harm, and efficaciousness. Even as these new knowledges created the perception of a problem, science offered cures for that problem. Government regulation could harness science to make the secret visible and correct market failures created by the use of trade secrets, supported by trademark and copyright regimes. The remedy, complicated, incomplete, and disputed at every turn, depended on replacing opacity and secrecy with seeing and knowing. Fraudulent behavior would be exposed through new knowledge created with chemistry. The invisible would be made visible, abolishing of trade secrets.

In law, patents are often portrayed as the flip side of trade secrets, a promotion of a similar end, innovation, by means of disclosure rather than of secrecy. After exploring the perceived threats posed by secrecy in the decades immediately before and after the passage of the 1906 Act, I consider the deployment of patents in the context of this quest for purity by examining the troubled careers of oleomargarine and insulin, each a new product resulting from the application of science to social problems and brought to market under patent protection. As doctors, chemists and bureaucrats struggled to achieve their perception of purity, they wrestled with incomplete alignments among professional norms, intellectual property doctrine, and the new regulations.

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