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**To Promote the Progress: Why Do
States Create New Intellectual
Property Rights?**

Gabriel J. Michael

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Introduction

Why do states create new intellectual property rights? While the main forms of intellectual property (IP)—patents, copyrights, trademarks, and trade secrets—have a long and storied history, during the 20th century a number of actors sought out legal protection for a variety of goods whose principal value was intangible. In some cases their efforts were successful, and states around the world created new bodies of law to protect the items in question, even going so far as to pressure other states to adopt similar legislation. In other cases these efforts failed, and states refused to create new IP rights. In still other cases, states pigeonholed or subsumed what could have been a new form of IP into an existing body of law. Why did states create new IP rights in some cases, but not others?

For example, the first efforts to establish IP rights for plant varieties date to the early 1900s in the United States and France. Early U.S. and European legislation offered some IP protection in the 1930s-1950s, and in 1961 the International Union for the Protection of New Varieties of Plants (UPOV) was established.² Today, UPOV comprises 70 members, including all

2 André Heitz, “The History of the UPOV Convention and the Rationale for Plant Breeders’ Rights,” in *Seminar on the Nature of and Rationale for the Protection of Plant Varieties Under the UPOV Convention* (Geneva: UPOV, 1994).

of North America, the vast majority of South America and Europe, and a significant portion of Asia. Viewed in retrospect, plant varieties seem to have followed a rather straightforward trajectory from total lack of protection around the turn of the 20th century to internationally-recognized protection at the turn of the 21st century.

On the other hand, the fashion industry is notable for its almost total lack of IP protection. In the U.S., this state of free competition and appropriation of fashion designs has persisted since at least 1941, when the Supreme Court ruled that the Fashion Originator's Guild, a cartel organized to limit copying of designs within the industry, had run afoul of antitrust law.³ In Europe, while formal legal protections for fashion designs do exist, empirical evidence suggests they are hardly used.⁴ And unlike many other areas of IP law, there has been no effort, successful or otherwise, to harmonize or globalize IP rights for fashion designs. Why would states choose to create IP rights for plant varieties, but not for fashion designs?

These two examples only begin to suggest the variation that exists in state decisions about IP rights. Intellectual property is often viewed as an area that has been broadly and successfully harmonized throughout much of the world. In one sense, this view is accurate: the 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) brought to bear the World Trade Organization's dispute settlement mechanism so as to enforce harmonized IP law amongst its 157 members. Before TRIPS, other highly influential international IP treaties with broad membership ensured that copyright, patent, and trademark laws around the world offered comparable protection. But in another sense, this view ignores important questions about existing variation in the types of IP rights that states do or do not offer. The IP rights that states

3 Kal Raustiala and Christopher Sprigman, "The Piracy Paradox: Innovation and Intellectual Property in Fashion Design," *Virginia Law Review* 92 (2006): 1697.

4 *Ibid.*, 1735.

have chosen to create vary both within state by issue area and between states. Nor is variation limited to obscure or irrelevant industries. Plant variety protection is critical to biotech giant Monsanto's business strategy for Roundup Ready® soybeans, and in 2009 the clothing and apparel industry generated more than \$1 trillion in revenue globally.⁵ : in addition to these examples, significant variation exists in state approaches to protecting geographical indications and pharmaceutical test data exclusivity, both of which implicate economically important industries.⁶

To be clear, the question I seek to answer is not about explaining support or resistance to the globalization or harmonization of IP rights. Rather, I am interested in new IP rights: what happened to cause a certain intangible to change from something that was not considered intellectual property to something that was considered intellectual property? Explaining the globalization or harmonization of already-existing IP rights is an important task, but fundamentally different than explaining why some things became intellectual property in the first place.

Although this dissertation dwells on a issue that is not widely studied within current international relations literature, the research question has both practical and academic importance. Practically speaking, there are enormous economic and social effects related to adopting new IP rights. Total U.S. royalties from IP grew an average of 11% annually from 1994

5 DataMonitor, “Global Clothing Industry Guide 2011”, 2011, http://www.datamonitor.com/store/Product/global_clothing_industry_guide_2011?productid=819E62A4-1CDB-4D10-BBD8-9E8F9C5B0D6A.

6 Geographical indications (GIs) refer to legally protected designations of the geographic origin of a product; this geographic origin has some perceived connection to quality, specific characteristics, or a reputation for either. GIs primarily protect wines, spirits, and cheeses, and to a lesser extent other food products like beers, meat, fruits, vegetables, butter, honey, and olive oil. Test data exclusivity refers to a form of IP protection granted for the results of clinical trials required by regulatory law for new pharmaceutical products.

to 2004, and U.S. exports of IP in the form of licensing exceeded \$120 billion in 2011, accounting for more than 20% of the all private export services.⁷ Intellectual property also necessitates a higher level of government involvement in the enforcement and exchange of property rights than tangible forms of property.⁸ In recent years, enhancing enforcement of IP rights has been regularly used as a justification to require stricter controls on subscriber activity from Internet service providers (e.g., France's HADOPI law, or the U.S.'s “six strikes” agreement) or mandate the private censorship of information (e.g., through copyright takedown notices).⁹ Furthermore, U.S. IP policy is frequently globalized, either through unilateral means (e.g., the actions of the Office of the U.S. Trade Representative) or plurilateral or multilateral negotiations spearheaded by the U.S. and other developed states (e.g., the Anti-Counterfeiting Trade Agreement). Understanding why states adopt new IP rights will offer timely and substantively important information about this policy area.

This dissertation will also contribute to the academic literature. First, it will help improve our understanding of how new property rights are created, including the roles that interest groups play in convincing governments to adopt new property rights. Second, it will contribute to our understanding of market creation; specifically, it will help us understand the effects of imposing

7 Carol A. Robbins, “Measuring Payments for the Supply and Use of Intellectual Property,” in *International Trade in Services and Intangibles in the Era of Globalization*, ed. Marshall B Reinsdorf and Matthew J Slaughter, Studies in Income and Wealth v. 69 (Chicago: University of Chicago Press, 2009); B. E. A. US Department of Commerce, “Bureau of Economic Analysis”, n.d., <http://www.bea.gov/iTable/iTable.cfm?ReqID=6&step=1>.

8 William M. Landes and The Honorable Richard A. Posner, *The Economic Structure of Intellectual Property Law* (Belknap Press of Harvard University Press, 2003), 415. This is because it is only the power of the state that imposes the economic characteristic of excludability on intellectual property protected by formal law. Excludability, which is necessary to makes intellectual property economically valuable, is thus an economic fiction. Contrast this to tangible property, where excludability exists to a much greater extent independent of the power of the state, even in the absence of formal law.

9 “Hadopi: Haute Autorité Pour La Diffusion Des Oeuvres Et La Protection Des Droits Sur Internet”, 2012, <http://www.hadopi.fr/>; Nate Anderson, “Major ISPs Agree to ‘Six Strikes’ Copyright Enforcement Plan,” *Ars Technica*, July 7, 2011, <http://arstechnica.com/tech-policy/2011/07/major-isps-agree-to-six-strikes-copyright-enforcement-plan/>; “Chilling Effects”, 2012, <http://www.chillingeffects.org/guide.cgi>.

legally-implemented scarcity on resources that are not necessarily naturally scarce, as in the case of market-based environmental policies, or certain kinds of electromagnetic spectrum license allocation policies. Finally, as discussed in more detail below, my preferred hypothesis relies on a blend of historical and sociological institutionalism, and thus this dissertation will contribute to institutionalist theory.

Dependent Variable

Determining whether or not a state creates a new IP right would seem to suggest the use of a dichotomous dependent variable, but this is misleading. States sometimes subsume a newly proposed form of IP into an existing body of law. Computer software is perhaps the preeminent example of this phenomenon. At one time, policymakers contemplated creating a new *sui generis* IP right to protect software, as it did not seem to fall clearly under the auspices of copyright law.¹⁰ Eventually, however, software came to be treated as just another instance of literary works, a decision globalized in Article 10.1 of TRIPS.

Subsumption does not even require expanding an existing IP right to cover new subject matter. In some cases, states may rely on alternative bodies of law, such as unfair competition law, to provide a weak form of IP protection. This is the approach the United States has taken with respect to databases, the underlying data of which are not eligible for copyright protection.¹¹

Given these complexities, I propose a trichotomous dependent variable: a state can adopt, reject, or subsume a newly proposed IP right. Table 1 reviews the values and conditions for coding the dependent variable.

10 Arthur John Keeffe and Terry G Mahn, "Protecting Software: Is It Worth All the Trouble," *American Bar Association Journal* 62 (1976): 907.

11 Jane C Ginsburg, "Copyright, Common Law, and Sui Generis Protection of Databases in the United States and Abroad," *University of Cincinnati Law Review* 66 (1998 1997): 151.

Table 1: Values and Conditions for Coding the Dependent Variable	
<i>Value of DV</i>	<i>Conditions sufficient to qualify as this value</i>
Adopted IPR	New <i>sui generis</i> IP legislation created (protection must be different from that available under patent, copyright, or trademark law; e.g., in term of protection, requirements, benefits, etc.)
Subsumed IPR	Already existing IP legislation reinterpreted to cover new subject matter OR Already existing IP legislation explicitly amended to cover new subject matter OR Protection claimed to be accomplished via general legal alternatives to IP, such as unfair competition law
Rejected IPR	No relevant legislation OR Relevant laws explicitly exclude subject matter OR Ambiguity about protection

The distinction between adoption and subsumption can be clearly defined. If existing IP rights are extended to cover new subject matter, this counts as subsumption. If, however, new rights are created, this counts as adoption. For example, the 1930 Plant Patent Act expanded the provisions of existing patent law to cover asexually reproducing plants, explicitly stating that “The provisions of this title relating to patents shall apply to patents for plants, except as otherwise provided.”¹² As such, plant patents fall under the purview of the U.S. Patent and Trademark Office, have the same duration as utility patents, and would be coded as an instance of subsumption. On the other hand, the 1970 Plant Variety Protection Act created new and different rights covering sexually reproducing plants. The requirements for and duration of protection are different than for utility patents, and the administrative office is a part of the

¹² *Plant Patent Act, 35 USC § 161, 1930.*

Department of Agriculture.¹³ Thus, the Plant Variety Protection Act would count as an instance of adoption.

The distinction between subsumption and rejection is less tractable. Legislative consideration and rejection of a proposed IP right would clearly count as rejection. But in some cases of subsumption, the protection claimed to be afforded through legal alternatives to IP may be so weak as to be ineffective. In the latter case, subsumption may simply serve as camouflage for *de facto* rejection. This difficulty in coding the selected cases arises with geographical indications in the U.S.: does the U.S. alternative to formal protection for geographical indications (relying on trademark and unfair competition law) constitute a *bona fide* attempt to offer protection, or is it merely a way for the U.S. to obey the letter of international law while violating its spirit? Answering this question will require more detailed analysis of the case, including the extent to which relevant actors believe the U.S. alternatives are effective, and the extent to which these alternatives are actually used.

Because the motivating question of this dissertation is about *state* decisions to create new IP rights, the dependent variable exclusively considers public formal law. In the next section, I discuss the possibility that even when *de jure* IP rights do not exist, *de facto* IP protection may nevertheless exist as a result of informal institutions. Furthermore, *de facto* IP protection may also result from formal, but private, institutions; Robert Merges has called these “private intellectual property systems.”¹⁴ While the existence of informal or formal private institutions may be critical in explaining why states choose to adopt, subsume, or reject new IP rights, for my purposes, it is only the creation of formal, public law that counts as state adoption.

13 *Plant Variety Protection Act*, 7 USC § 2321-2583, 1970.

14 Robert P. Merges, “Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations,” *California Law Review* 84 (1996): 1361.

Theories

Existing Literature

While the past two decades have witnessed an explosion in the amount of writing dealing with intellectual property, comparatively little of that writing has been focused on understanding the origins of intellectual property rights.¹⁵ The works that do explore these origins [such as... Piracy? IPR, a critical history?] tend to approach the matter from a historical perspective, and avoid drawing generalizable conclusions about how intellectual property rights are formed.

By contrast, there is much more substantial current of literature seeking to explain how and why traditional (e.g., tangible or real) property rights are formed. Much of this work originates in economics, as well as the “law and economics” community associated with the University of Chicago. Initially, early work focused on purely economic factors, to the purposive exclusion of politics. Characteristic of and foremost among this work is Harold Demsetz's 1967 article, “Toward a Theory of Property Rights,” which succinctly states, “property rights arise when it becomes economic for those affected by externalities to internalize benefits and costs.”¹⁶ Yet Demsetz's rather vague explanation obscures precisely how property rights “arise.” Even if the economic balance tips in favor of establishing property rights, actors must still take certain steps in order to establish them. Pure economic approaches are also fundamentally incomplete, given the critical role of the state in defining, interpreting, and enforcing property rights—especially intellectual property rights.

15 “Google Books Ngram Viewer”, 2012,
http://books.google.com/ngrams/graph?content=intellectual+property&year_start=1970&year_end=2008&corpus=0&smoothing=0.

16 Harold Demsetz, “Toward a Theory of Property Rights,” *The American Economic Review* 57, no. 2 (May 1, 1967): 354.

While actors may take steps to establish property rights privately, such private action is only feasible in a situation of relative anarchy. In examining such a situation, Umbeck tempers Demsetz's rather sterile analysis of the emergence of property rights with a hearty helping of violence, arguing in his study of the California gold rush that “ultimately all ownership rights are based on the abilities of individuals, or groups of individuals, to forcefully maintain exclusivity.”¹⁷ Even though Umbeck's case study deals with a situation of relative anarchy, it does suggest a role for the state as the only contemporary entity with a legitimate monopoly on violence.¹⁸

In *Contracting for Property Rights*, Gary Libecap attempted to construct an explicitly political analysis of the formation of property rights, concluding on the basis of several case studies that property rights emerge through a political process where by political entities negotiate with one another or with the state, which may take the form of lobbying.¹⁹

Continuing in theme of the political allocation of property rights, Riker and Sened helpfully specify four necessary conditions for the emergence of property rights: scarcity, desire (on the part of those who want the right), willingness (on the part of those who grant the right), and obedience (on the part of those bound to respect the right).²⁰

These authors frequently complain about the difficulty in analyzing the emergence of property rights. For example, Umbeck asserts that “most rights arose hundreds or even thousands of years ago,” and concludes that for potential researchers, “locating reliable data would be most

17 John Umbeck, “Might Makes Rights: A Theory of the Formation and Initial Distribution of Property Rights,” *Economic Inquiry* 19, no. 1 (1981): 39.

18 *Ibid.*, 49. At the end of the Mexican-American conflict in 1848, “the U.S. Military governor of California decreed ‘From and after this date, the Mexican laws and customs now prevailing in California... are hereby abolished.’ No alternatives were offered.”

19 Gary D. Libecap, *Contracting for Property Rights* (Cambridge University Press, 1994).

20 William H. Riker and Itai Sened, “A Political Theory of the Origin of Property Rights: Airport Slots,” *American Journal of Political Science* 35, no. 4 (November 1, 1991): 951–969.

difficult.”²¹ Riker and Sened marvel at their fortune in discovering an appropriate case study, calling the allocation of airport time slots “perhaps the only such grant for which there is enough surviving detail on its origin to allow for investigation of the significance of the several conditions for the grant.”²² Other case studies in the literature focus on unusual or long-distant property rights, such as the Native American fur trade, or land, livestock, and water rights in the early American West.²³ Yet the plains of research are hardly as barren as this overview would seem to indicate. The existing literature seems to take for granted that the creation of new property rights is a relatively rare event. If one constrains one’s definition of property to only tangible or real property, this is accurate: new property rights are typically only allocated unusual circumstances: e.g., exploration of a new continent, discovery of a hitherto unknown natural resource, colonization, or revolution.

However, if the definition of property is expanded to include intangible property and intellectual property, the creation of new property rights happens more frequently and in more mundane circumstances. Rather than, e.g., political revolution and the subsequent privatization of formerly national enterprises, new property rights may be formed by the stroke of a pen in a legislature, creating valuable commodities out of thin air.²⁴ By expanding—or correcting—the definition of property in this way, the number of potential case studies increase. The quality of these potential case studies is also high; unlike some of the historical case studies conducted in the existing literature, case studies involving the creation of new intellectual property rights are relatively recent and well-documented.

21 Umbeck, “Might Makes Rights,” 57.

22 Riker and Sened, “A Political Theory of the Origin of Property Rights,” 951.

23 Terry L. Anderson and P. J. Hill, “The Evolution of Property Rights: A Study of the American West,” *Journal of Law and Economics* 18, no. 1 (April 1, 1975): 163–179.

24 In the case of Riker & Sened’s airport slots, the commodities are created out of thin air quite literally.

Apart from the literature on how new property rights are formed, there is also an academic literature concerned with how exogenous changes generate subsequent changes in actor's preferences. Neil Fligstein writes broadly about how such exogenous changes, which are often a result of government intervention, can "force the reorganization of markets."²⁵ More specifically, however, exogenous changes quite clearly affect the behavior of individuals actors. For example, Shadlen notes how changes in state policy affect actors' preferences.²⁶ In Shadlen's analysis, actors' preferences change due to newly acquired technical capabilities. Brazilian pharmaceutical firms initially supported legislation allowing pre-grant opposition to patent applications, as such opposition could reduce foreign competition; however, as these firms acquired new capabilities for incremental innovation, their preferences changed, and they began to view pre-grant opposition as a potentially dangerous variable in their own attempts to patent products.

While Shadlen ties these firms' newly acquired capabilities to the Brazilian states' innovation policy, firms' preferences may also shift as a result acquiring new property rights through legislation. Shadlen nearly approaches this realization when he writes that "new IP regulations transform market structure by turning the incentives dramatically against investing in production of generic versions of new drugs."²⁷ However, his work seems to overlook the even more transformative effect of entirely new property rights, as opposed to the marginally transformative effect of regulations about existing property rights.

25 Fligstein, *The Architecture of Markets*, 13.

26 Kenneth C. Shadlen, "The Political Contradictions of Incremental Innovation: Lessons from Pharmaceutical Patent Examination in Brazil," *Politics & Society* 39, no. 2 (June 1, 2011): 143–174.

27 Kenneth C. Shadlen, "The Political Economy of AIDS Treatment: Intellectual Property and the Transformation of Generic Supply," *International Studies Quarterly* 51, no. 3 (2007): 569.

Preferred Theory

While any preferred theory is at this stage necessarily tentative, I am currently leaning towards a theory based on a blend of historical and sociological institutionalism. From an institutionalist perspective, the creation of a new IP right is difficult to explain. Institutional literature in international relations emphasizes the “stickiness” of institutions, and their tendency to evolve to serve purposes far beyond those envisioned when the institution was created, in large part because of the high costs of establishing institutions in the first place.²⁸ The path of least resistance would seem to be modifying an existing IP regime, i.e., what I call subsumption. In contrast, creating a new IP right effectively means creating a new body of law—a case of institutional innovation. Empirically, subsumption does seem to be a common outcome, especially if expansion of the subject matter of existing IP rights is taken as evidence of subsumption.²⁹ Yet during the latter half of the 20th century, a significant number of *sui generis* IP rights were proposed, and many were adopted. Institutional literature is frequently preoccupied with demonstrating why current institutional contexts represent an equilibrium state, with the result that institutional innovation remains a challenging theoretical topic.³⁰ Thus, to ask why states create new forms of IP is really to ask about why institutional change and innovation occurs in some cases and not others.

28 Douglass Cecil North, *Institutions, Institutional Change, and Economic Performance* (Cambridge University Press, 1990); G. John Ikenberry, *After Victory: Institutions, Strategic Restraint, and the Rebuilding of Order After Major Wars*, Princeton Studies in International History and Politics (Princeton: Princeton University Press, 2001).

29 E.g., consider the repeated marginal expansions of copyright terms, and copyright and patent subject matter.

30 Peter A. Hall, “Historical Institutionalism in Rationalist and Sociological Perspective,” in *Explaining Institutional Change: Ambiguity, Agency, and Power*, ed. James Mahoney and Kathleen Ann Thelen (Cambridge: Cambridge University Press, 2010).

Inspired by the historical and sociological institutionalist literature, I emphasize the role of the state 1) in shaping and constraining, through processes of path dependence and sequencing, the types of demands that actors make and the kinds of actions that states take; and 2) in some cases, establishing the conditions for the emergence of new actors through market creation policies that generate feedback effects. The remainder of this section considers these roles of the state in more detail.

First, the current institutional environment—both formal and informal—is a key factor in determining whether actors will seek a new IP right, an expansion of an existing right, or not make any new demands at all. Within historical institutionalist theory, the effect of current or past law and policy upon the prospects for future law and policy is a clear case of path dependence. As a theory, path dependence is sometimes panned as lacking in specificity, or alternatively as being too deterministic.³¹ However, proponents of the theory have sought to clarify the specific mechanisms by which it operates. Sequencing—both within a particular state, and relative sequencing between states—offers a useful way to understand precisely how the formal legal institutions of one period can affect the prospects for change in a later period.³² Similarly, the current institutional environment influences the strategies that actors choose, both advantaging some strategies and foreclosing others.

As an example of sequencing, consider the fact that even though the World Intellectual Property Organization (WIPO) had drafted a *sui generis* model law for the protection of software

31 Paul Pierson, “Increasing Returns, Path Dependence, and the Study of Politics,” *The American Political Science Review* 94, no. 2 (June 1, 2000): 251–267; Colin Crouch and Henry Farrell, “Breaking the Path of Institutional Development? Alternatives to the New Determinism,” *Rationality and Society* 16, no. 1 (February 1, 2004): 5 – 43.

32 Henry Farrell and Abraham L. Newman, “Making Global Markets: Historical Institutionalism in International Political Economy,” *Review of International Political Economy* 17, no. 4 (2010): 609.

in the 1970s, and it was not at all clear that software qualified for copyright protection, the EU's eventual decision to adopt community-wide copyright protection for software was strongly influenced by the earlier U.S. and Japanese decisions to take a copyright approach. As an example of the path dependent nature of framing, consider that in proposing a new IP right, actors are faced with a strategic choice: should they frame the new right as an expansion of existing rights (and thus a minor modification of an existing institution), or as an entirely novel right (and thus an institutional innovation)? There are benefits and consequences to each of these strategies. If existing law seems “close enough,” it may be politically easier to propose an expansion of subject matter, even if the quality of protection to be gained is not ideal. On the other hand, likening the new right to existing law may simply be too difficult, and thereby force actors to propose a *sui generis* IP right. Early 20th century fruit and plant breeders faced this type of dilemma when they sought IP protection for plant varieties.³³

Other factors that are not directly related to state activity may affect whether actors bother to demand new IP rights. Sociologically-oriented institutionalist literature has identified the ways in which informal institutions can constrain actors' behaviors and establish stable equilibria by relying not on formal law and contract, but rather informal norms and the logic of appropriateness.³⁴ There have been several recent attempts to demonstrate the existence of

33 “Le moment est venue d'assurer au chercheur patient une récompense justifiée aussi bien en pomologie, horticulture et agriculture que dans le domaine des arts et de l'industrie... pourtant nous craignons qu'il ne reste la difficulté fondamentale d'assimiler l'*obteneur* à l'*auteur*.” (Now is the time to ensure a fair reward for the diligent researcher in fruit cultivation, horticulture, and agriculture, just as in the arts and industry... yet we fear that the fundamental difficulty of likening a *breeder* to an *author* remains.) Bureau International de l'Union pour la Protection des Oeuvres Littéraires et Artistiques, *Le Droit d'Auteur* (Berne: Organisation Mondiale de la Propriété Intellectuelle, 1911), 148.

34 Lisa Bernstein, “Opting Out of the Legal System: Extralegal Contractual Relations in the Diamond Industry,” *Journal of Legal Studies* 21 (1992): 115; Barak D. Richman, “How Community Institutions Create Economic Advantage: Jewish Diamond Merchants in New York,” in *American Law & Economics Association Annual Meetings*, 2005, 51; Robert C. Ellickson, *Order Without Law: How Neighbors Settle Disputes* (Cambridge, Mass:

informal, norms-based systems of IP; sometimes, these informal systems operate alongside formal systems, as in the realm of scientific research; in other cases, they operate in the absence of any formal legal system, as in the realm of French *haute cuisine*.³⁵ This raises a more general possibility: states may fail to establish new IP rights when satisfactory (or at least satisfying) informal IP institutions already exist, because in such cases actors have no compelling incentive to demand a formal institution.

Second, and more broadly, state activity partially constitutes the very organization of actors in the market, and is thereby fundamental in determining the kind of political coalitions that form and conflicts over IP rights that occur. Clearly defined property rights, whether formal or informal, are a prerequisite for functional markets. In the modern era, the state plays a critical role in defining, interpreting, and enforcing formal property rights.³⁶ Thus, state activity in defining property rights is critical to allow markets to function efficiently, and in some cases, to allow markets to function at all. Without state activity to enforce property rights, private actors must expend resources to enforce those rights, leading to costly, duplicative, and sometimes violent efforts, and the social losses associated with these efforts.

Private actors can of course band together to enforce property rights amongst themselves without state intervention, and this can be accomplished through both formal and informal institutions. The *lex mercatoria* is probably the most well-known example of this behavior,

Harvard University Press, 1991). While the diamond industry is an oft-cited example of this phenomenon, it is not unique; Ellickson's book documents how ranchers apportion fencing costs in ignorance of, and sometimes contradiction to, formal legal institutions.

35 Arti Kaur Rai, "Regulating Scientific Research: Intellectual Property Rights and the Norms of Science," *Northwestern University Law Review* 94 (1999): 77; Emmanuelle Fauchart and Eric von Hippel, "Norms-Based Intellectual Property Systems: The Case of French Chefs," *Organization Science* 19, no. 2 (March 2008): 187 – 201.

36 Lee J. Alston and Bernardo Mueller, "Property Rights and the State," in *Handbook of New Institutional Economics*, ed. Claude Ménard and Mary M. Shirley (Berlin, Heidelberg: Springer Berlin Heidelberg, 2008), 585, <http://www.springerlink.com/content/t34512hh61719155/>.

although within economics and political science, Avner Greif's work on the private contract enforcement institutions of medieval Maghribi traders is also relevant.³⁷ Today however, the state is the preeminent definer and enforcer of property rights.

This entire line of argument applies *a fortiori* to intellectual property rights. As just discussed, the state's role in defining, interpreting, and enforcing formal property rights helps to constitute markets. Informal institutions and pre-existing market and social relations will also influence the kind of property rights that states will create and define, and so markets and the state's role in markets are mutually constitutive. However, when thinking about intellectual property, the state's role looms larger. With respect to tangible property, the state does not create the items that are exchanged, only the rules regarding their exchange. With intellectual property, state activity actually creates the items that are exchanged. When a car is sold, state activity defines the conditions and expectations surrounding the transaction. In contrast, when a copyright or patent is licensed or transferred, the actual object of exchange is a state-created right of exclusion, not the underlying idea or expression.

State activity in defining formal property rights is more than simply a necessary condition for efficient markets. The kinds of property rights that states choose to define fundamentally shape the type of market that will arise. For example, in the case of U.S. copyright law, state definition of property rights permits the rental of videocassettes, DVDs and Blu-Ray discs, but prohibits the rental of audiocassettes, audio CDs, and computer software. As a result, there exists a substantial home video rental market, but no audio CD or computer software rental market (an

³⁷ Harold J Berman and Colin Kaufman, "Law of International Commercial Transactions (Lex Mercatoria)," *Harvard International Law Journal* 19 (1978): 221; Avner Greif, "Contract Enforceability and Economic Institutions in Early Trade: The Maghribi Traders' Coalition," *The American Economic Review* 83, no. 3 (June 1, 1993): 525–548.

exception exists for video games). Moving beyond simple proscription of certain kinds of markets, the choice of a liability rule framework (pay upon use of a copyrighted work) rather than a property rule framework (first obtain permission to use a copyrighted work, then pay only if granted permission) has facilitated the emergence of collective rights organizations for musicians, composers, and lyricists both in the U.S. and other countries.³⁸

The key point is that state decisions to adopt new property rights have important consequences both for whether new markets will emerge, and if they do, what form they will take. However, the influence of the state on the market is not limited to the defining of property rights. Economic sociologists such as Neil Fligstein emphasize the fundamental role of the state in the organization of markets:

Governments underwrite technology, regulate competition, and adjudicate between competing firms. Because of existing government-firm understandings about firms' behavior, certain courses of action are unavailable... Governments develop a great number of rules or institutions oriented toward governing markets... Governments support these rules by direct intervention in markets, by owning firms, and by the use of courts and regulatory agencies. Finally, governments can take actions that intentionally or unintentionally force the reorganization of markets.³⁹

To the extent that state action enables, encourages, or sustains a particular organization of actors in a given market sector, state action will affect whether and how actors demand IP rights. For example, separate IP rights-holding actors sometimes pool their resources in order to increase organizational efficiencies and reduce information, search, and transaction costs. In the realm of copyright, this has been accomplished by collective rights organizations; in the realm of patent, by patent pools.⁴⁰ This kind of cooperative activity itself results in part from the character of the

38 Merges, "Contracting into Liability Rules."

39 Neil Fligstein, *The Architecture of Markets: An Economic Sociology of Twenty-First-Century Capitalist Societies* (Princeton: Princeton University Press, 2001), 12–13.

40 Robert P Merges, "Intellectual Property Rights and the New Institutional Economics," *Vanderbilt Law Review* 53 (2000): 1857.

IP rights that have been defined by the state.⁴¹ However, other kinds of government activity can constrain such cooperative efforts or limit their efficacy; as noted above, the Fashion Originator's Guild, a private institution created to control the copying of fashion designs, was eliminated by the Federal Trade Commission. Collective rights organizations have likewise fallen under repeated antitrust scrutiny. As a result, antitrust law may drive actors to demand IP rights that, in the absence of such law, they would not feel compelled to demand.

More broadly, when actors demands new IP rights or an expansion of existing rights, they may face opposition. This opposition comes from various interested parties: e.g., downstream users of a potentially protectable product whose cost of doing business will be increased with the adoption of new IP rights, competing firms that perhaps rely more on imitation than innovation, and more recently, professionals and activists harboring a general skepticism of IP rights. States play a fundamental role not just in adjudicating the competing claims of these actors, but in privileging certain actors over others, and even constituting certain kinds of actors. For example, opposition in the scientific community to restrictive copyright policies may be due to a scientific ethos emphasizing the free flow of information; however, this ethos is arguably sustained by a financial structure in which a large portion of scientific activity is funded by public grants, thereby ensuring that basic scientific research need not turn a profit. Likewise, the opposition of the generic drug industry to test data exclusivity for patented pharmaceutical products makes economic sense; however, the U.S. generic drug industry itself owes its existence in large part to the 1984 Hatch-Waxman Act that established test data exclusivity in the first place.⁴²

41 Merges, "Contracting into Liability Rules," 1301; Merges, "Intellectual Property Rights and the New Institutional Economics," 1864.

42 Elizabeth Stotland Weiswasser and Scott D Danzis, "The Hatch-Waxman Act: History, Structure, and Legacy," *Antitrust Law Journal* 71 (2004 2003): 585.

Given knowledge about 1) the way that extant law and policy affects the types of demands that actors make and the types of actions that states take, and 2) the way that states shape the market both through defining property rights and constituting certain actors, it should be possible to understand why states adopt, subsume, or reject proposed IP rights.⁴³ Figure 1 (see following page) is a diagrammatic description of what happens when new IP rights are proposed. It attempts to capture the various elements described in this section.

Hypotheses

A number of hypotheses can be inferred from this tentative theory. In this section, I discuss each hypothesis and suggest how each might be tested.

- ▲ If effective informal institutions for protecting IP rights exist, actors will be less likely to demand formal IP rights.
 - Informal institutions can be identified both through secondary sources and existing scholarly literature; additionally, interviews with practitioners may reveal evidence of informal institutions. A likely case for such informal institutions is the area of software prior to the extension of copyright laws. The early conventions and practices surrounding computer programming and code sharing may have obviated the need for formal institutional control of software as intellectual property.⁴⁴ If such an informal institution existed, this hypothesis suggests the institution became less effective over time, eventually prompting actors to demand formal IP rights in software.

43 Implicit here is the assumption that private actors demand, and states grant (or subsume or reject). However, it is possible that states may adopt new IP rights even in the absence of strong demands for them. Weakly-utilized *sui generis* IP rights, such as the EU's protection for computer databases, suggest potential examples of this phenomenon.

44 Steven Weber, *The Success of Open Source* (Cambridge, MA: Harvard University Press, 2004), chap. 2.

- ⤴ If antitrust law precludes the development or maintenance of formal private institutions for protecting IP, either actors will demand formal public IP rights as a replacement, or actors will alter their behavior to rely less on IP rights.
 - The interaction between antitrust law and formal private institutions of IP can be assessed by studying both the successes and failures of relevant formal private institutions. Among the selected case studies, the Fashion Originator's Guild is a prominent example of the ultimate failure of a formal private institution; as for success, geographical indications, which are not owned by any one actor but rather collectively administered, may prove relevant. In examining this hypothesis, the first step will be to see if and how antitrust law came into conflict with formal private institutions, e.g., through lawsuits or regulatory scrutiny; the second step will be assessing how actors responded to such conflict.
- ⤴ If a state adopts formal IP rights in a given sector, other states considering adopting IP rights in the same sector but at a later time will be more likely to adopt a formal IP right similar to the first state's.
 - This kind of sequencing is sometimes explicitly addressed in legislative and policy materials, and at other times can be inferred. For example, when the EU was debating how to extend IP protection to software, explicitly cited in the EU Commission's recommendation was the fact that the U.S. and Japan had already adopted a copyright-style approach.
- ⤴ When a state adopts or subsumes a new IP right, actors who benefit from the right but who were initially ambivalent about it will later demand the sustenance of the right.

- This hypothesis can be tested by looking for shifting political positions, typically moving from ambivalence to support, in relevant industries; or alternatively, the formation of new industry or lobbying groups in an already-existing industry.

Scope Conditions

The proposed theory and its hypotheses are likely only applicable to large, economically important market sectors. Similar dynamics may not occur in smaller market sectors. Actors in smaller market sectors may have an easier time overcoming collective action problems and developing effective informal institutions of IP rights. Alternatively, smaller market sectors may comprise actors who do not see net utility in establishing IP rights in the first place. Finally, governments may be less interested in promoting IP rights as a means of economic growth if the effects of those rights will only be felt in a small market sector.

The scope of the theory should not necessarily be extended to all kinds of property rights. Intellectual property rights have unique economic characteristics (e.g., non-rivalry and non-excludability) that make them fundamentally different from property rights in tangible goods. The theory may have more explanatory power when applied to other property-like regimes imposed on resources that are not naturally scarce, or whose natural scarcity is supplemented by an artificially induced scarcity, such as markets for electromagnetic spectrum.

Finally, the scope of the theory is almost certainly limited to understanding why large, highly developed states adopt new IP rights. These states possess both the level of economic development and complexity to make IP rights a pressing concern, and the legal and technical capacity to effectively consider and implement such rights. Very different dynamics are at play when less developed states adopt new IP rights; frequently, such rights are a result of bargaining,

as during trade negotiations, or even coercion. Limited forms of bargaining and coercion may occur even when more powerful and developed states consider adopting new IP rights, but the effects of such behavior will be less relevant.

Alternative Theories

Collective Action Theory

It is not difficult to understand why businesses might band together to support the creation of a new intellectual property right. Mancur Olson's classic work provides a convincing analysis of collective action in this arena: if an IP right conveys concentrated benefits on a relatively small group of actors, but diffuse costs on a larger group, the former has a strong incentive to coordinate in support of the right, while the latter has hardly any incentive to oppose it.⁴⁵ Olson's logic appears to apply in many relevant situations: copyright term extensions in both the U.S. and Europe routinely garner the support of a small number of actors that have much to gain from an additional decade or two of licensing revenue.⁴⁶ Opponents of such extensions, when they manage to organize at all, struggle to demonstrate the value of a vague public domain.⁴⁷ Some of the more obscure *sui generis* forms of intellectual property seem to be perfect empirical examples of Olson's logic: as part of copyright law reforms adopted in 2000, the United States now offers IP protection for boat hull designs—protection which attracts an average of just 40 registrations across the entire country annually. If the logic of collective action can also explain instances where states failed to create new IP rights (presumably because the

45 Mancur Olson, *The Logic of Collective Action: Public Goods and the Theory of Groups*, Harvard Economic Studies v. 124 (Cambridge, Mass: Harvard University Press, 1971).

46 Landes and Posner, *The Economic Structure of Intellectual Property Law*, 408.

47 Christina N Gifford, "The Sonny Bono Copyright Term Extension Act," *University of Memphis Law Review* 30 (2000 1999): 363.

costs of such rights were significant and concentrated), collective action theory may offer a satisfactory explanation to the research question.

Varieties of Capitalism

The varieties of capitalism literature also provides an important alternative explanation. This literature broadly distinguishes between two different forms that capitalist economies tend to assume: the liberal market economy (LME) and the coordinated market economy (CME). LMEs are distinguished by highly competitive market arrangements, dominance of the formal contract as a means to secure services, and reliance on price signals to coordinate activity between firms. In contrast, CMEs are distinguished by less reliance on formal contracts and less competition; instead, firms often explicitly collaborate with one another rather than interacting through market mechanisms.⁴⁸

Many comparative studies focusing on differences in political economy between the U.S. and European countries reference the varieties of capitalism literature; this theoretical approach has been invoked to explain transatlantic variation in social welfare policy, labor market policy, and firm strategies. With respect to IP rights, many scholars claim that a fundamental difference in attitude and approach to IP exists between the U.S. and European states. As evidence, these scholars typically cite unique or unusual features of European IP law without an apparent counterpart in U.S. law, such as moral rights, *droit de suite*, and library lending licenses.⁴⁹ Issue areas where the U.S. and European countries appear to part ways also lend some support to the

48 Peter A. Hall and David W. Soskice, "An Introduction to Varieties of Capitalism," in *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage* (Oxford University Press, 2001), 8.

49 Moral rights refer to the rights of creators to receive attribution for their work, as well as rights to the integrity of the work, *inter alia* (e.g., a bad translation or film version of a book can be said to have violated the author's moral right to the integrity of the work). *Droit de suite* refers to laws that require royalties to be paid to artists when their work is sold between two third parties. Library lending licenses are fees paid by libraries to compensate authors for the imputed lost sales caused by library lending.

idea of a transatlantic divide: in general Europe has stronger protection for geographical indications than the U.S., and the European Union has a *sui generis* database IP right without parallel in the United States. If these differences can be explained by variation in inter-firm or firm-government relations, the varieties of capitalism literature present another possible explanation of the research question. For example, the collective administration of geographical indications may represent an instance of inter-firm cooperation.

Methodology

Unit of Analysis

Because there is variation both between countries on the same potential IP right and within a country on different potential IP rights, the unit of analysis is the country-issue. This allows for both within-country and cross-country variation to help explain variation in the dependent variable.

Case Selection

Cases have been selected with several factors in mind. First, the cases vary on the dependent variable: the outcomes of adoption, subsumption, and rejection of new IP rights are all present in the selected cases. Second, the cases, despite not fitting neatly into the main forms of IP, are nevertheless substantively important, either from an economic or political perspective, and often both. While in theory cases may be drawn from a universe that includes any newly proposed or expanded IP right, in practice many potential cases are simple expansions of the term of protection, logical extensions of subject matter, or legislative codifications of court decisions. Other cases involve *bona fide* novel proposals, but are not economically important enough to warrant detailed study; in the U.S., these include registration for boat hull designs

(averaging around 40 annual grants) and even protection for integrated circuit designs (“mask works,” which peaked at 1,229 grants in 1989, but have steadily declined to less than 300 per year in recent years). In the EU, computer database protection has been litigated only a handful of times, and since there is no central registry for the holders of such protection, there is little sense of how important or unimportant the right is.

I have eliminated the main forms of IP—patents, copyrights, and trademarks—for several reasons. These property rights have historical lineages that can be traced back several centuries or more, making it difficult to identify a precise point at which an individual or group first sought protection. Furthermore, each of these forms of IP itself covers a wide variety of products and industries, having been repeatedly expanded over time. They are too broad to form useful cases for this study. In contrast, the cases selected all concern relatively recently proposed IP rights that can be more clearly and narrowly defined. The oldest case dates back to the late 19th and early 20th century, but most cases have been actively debated throughout the 20th century, and in some cases the political activity is ongoing.

I tentatively propose to study the following proposed IP rights: geographical indications, fashion design protection, test data exclusivity, and protection for software. For each case, I plan to study at a minimum the U.S. and EU approaches to the issue. In the remainder of this section, I briefly describe each case and explain why I have selected it.

Geographical Indications

Geographical indications (GIs) refer to legally protected designations of the geographic origin of a product; this geographic origin has some perceived connection to quality, specific characteristics, or a reputation for either. GIs primarily protect wines, spirits, and cheeses, and to

a lesser extent other food products like coffee, rice, beers, meat, fruits, vegetables, butter, honey, and olive oil. More strictly administered subsets of GIs include protected designations of origin (PDO) at the EU level, and *appellations d'origine contrôlée* (AOC) within France. Similar French-style systems exist at the national level in Spain, Italy, Portugal, Austria, and Switzerland. These stricter subsets stipulate not only the geographic origin of a product, but also consistent and traditional methods of production. World-famous GIs include Champagne wine and Feta cheese.

While mature, formal protection for GIs has existed in Europe since at least the beginning of the 20th century, over the past two decades GIs have become an increasingly important political and economic topic. The 1994 TRIPS agreement established a worldwide minimum level of protection for GIs; furthermore, rapid globalization has led to increased concern about “authenticity, heritage, and locality in a rapidly integrating world.”⁵⁰ Consumer preferences appear to be shifting to favor quality and authenticity as differentiating characteristics of food products.⁵¹ Carlos Correa reports that “sales of agricultural products and foodstuff under European protected designations of origin... have reached Euro 7,7 billion in 2001,” 20% of which was exported.⁵² This figure comprises mostly cheeses and pork products, and does not include the large and lucrative wine and spirits market. To provide further context for this figure, the total retail value of all recorded music sales (both digital and physical) in the U.S. was less

50 Kal Raustiala and Stephen R. Munzer, “The Global Struggle over Geographic Indications,” *European Journal of International Law* 18, no. 2 (April 1, 2007): 339.

51 Felix Addor and Alexandra Grazioli, “Geographical Indications Beyond Wines and Spirits,” *The Journal of World Intellectual Property* 5, no. 6 (November 1, 2002): 874.

52 C.M. Correa, “Protection of Geographical Indications in Caricom Countries,” *Caribbean Regional Negotiating Machinery Technical Papers* (2002): 18.

than \$6.9 billion in 2010.⁵³ As a political issue, despite *de jure* harmonization at the international level, major differences exist between the U.S. and European approaches to protecting geographical indications, making GIs a contentious transatlantic trade issue.⁵⁴ GIs have also been touted as a way to promote rural development and a way to regulate what is considered “local” food.⁵⁵ For these reasons, GIs represent a substantively important area of variation in IP rights.

Fashion Designs

Intellectual property protection for fashion designs represents another case of transatlantic variation. In 1998, the European Union adopted a community-wide directive on the protection of industrial designs, including apparel designs that are relevant to the fashion industry. Generally speaking, IP protection for industrial designs covers the aspects of products that are not entirely functional. In the U.S., industrial designs may be protected by design patents, which differ from the much more frequent and valuable utility patent in both application requirements and length of protection. The quintessential example of an industrial design protected by a design patent is the shape of the Coca-Cola glass bottle. While the sinuous form of the bottle is not entirely functional, it is too closely integrated with a utilitarian object to qualify for copyright as a sculptural work. Industrial design rights can thus fill a lacuna in legal protection between utility patents, which protect entirely utilitarian products, and copyright, which protects non-utilitarian works of the mind. However, the U.S. has never protected fashion or apparel designs, either under design patents or any other legislation. The legal rationale for

53 Recording Industry Association of America, *2010 Year-End Shipment Statistics*, 2010, <http://76.74.24.142/548C3F4C-6B6D-F702-384C-D25E2AB93610.pdf>.

54 Tim Josling, “The War on Terroir: Geographical Indications as a Transatlantic Trade Conflict,” *Journal of Agricultural Economics* 57, no. 3 (September 1, 2006): 337–363.

55 Addor and Grazioli, “Geographical Indications Beyond Wines and Spirits,” 875; Daniele Giovannucci, Elizabeth Barham, and Richard Pirog, “Defining and Marketing ‘Local’ Foods: Geographical Indications for US Products,” *The Journal of World Intellectual Property* 13, no. 2 (March 1, 2010): 94–120.

this lack of protection stems from requirements that design patents be original, novel, and non-obvious—a burden that has proven largely insurmountable for the vast majority of articles of clothing.⁵⁶

The EU's protection for industrial designs has less stringent eligibility requirements, with the result that fashion and apparel designs can be protected under the law for 25 years. Interestingly, despite the availability of formal legal protection and the seemingly valuable rights conveyed by the EU directive, analysis of registration data indicates that fashion designs are only rarely registered, and in many cases firms view the design right as an alternate form of trademark or copyright protection for logos or images printed on clothing.⁵⁷

Fashion design protection is an important case for consideration not only because of the economic importance of the fashion and apparel industries and the transatlantic variation that exists, but also because the U.S. experience represents a negative case. Despite decades without IP protection for fashion designs, not only have relevant actors such as fashion firms and retailers failed to convince the government to adopt such IP protection, but by some accounts, until quite recently they have not even tried.⁵⁸ Understanding the differences that led to adoption of formal legal protection in the EU but rejection in the U.S. may illuminate the varying role of the state in these two regions.

Data Exclusivity

Also known as marketing exclusivity or test data protection, data exclusivity refers to a relatively recent form of IP dating from the 1980s. In many countries, pharmaceutical and

56 Anne Theodore Briggs, “Hung Out to Dry: Clothing Design Protection Pitfalls in United States Law,” *Hastings Communications and Entertainment Law Journal* 24 (2002): 176–177.

57 Raustiala and Sprigman, “Piracy and Paradox,” 1740.

58 *Ibid.*, 1691, 1715–1716.

pesticide firms are required to conduct clinical trials or others tests to demonstrate the safety and efficacy of their products. Frequently, information submitted for regulatory approval in this way is considered a trade secret and cannot be disclosed to competing companies or the public. However, in an effort to ensure viable generic competition when branded pharmaceuticals go off-patent, many regulatory agencies do not require generic manufacturers to submit additional clinical trial or test data in order to receive regulatory approval. In the U.S., for example, generic manufacturers of standard pharmaceutical products need only demonstrate bioequivalence—i.e., that the generic pharmaceutical is available in the body at the same rate and to the same extent as the branded version—in order to rely upon the clinical trials conducted by the original firm.

The advantages to competitors of relying on already-submitted clinical trial and test data are significant. Duplicating such trials is not only costly and time-consuming, but also raises bioethical concerns. However, firms that have undertaken the original clinical trials argue that to allow competitors to rely on test data constitutes unfair competition, and that these firms deserve IP protection for such test data. The U.S. adopted such data exclusivity in 1984 as part of the Hatch-Waxman Act, while the EU adopted similar protection in 1987. The term length for data exclusivity is significantly shorter than that for utility patents, with the result that in most cases data exclusivity has long since expired by the time the patent terminates and the pharmaceutical is eligible for generic competition. However, in a significant minority of cases, data exclusivity can extend beyond the term of patent protection, thereby delaying generic competition and potentially serving as a form of “evergreening,” a legal strategy in which pharmaceutical firms attempt to extend exclusive rights through a variety of mechanisms.⁵⁹

59 Valerie Junod, “Drug Marketing Exclusivity Under United States and European Union Law,” *Food and Drug Law Journal* 59 (2004): 437.

While both the U.S. and the EU have explicitly adopted data exclusivity, the reasons for the adoption differ. In the U.S., data exclusivity appears to have emerged as a legislative compromise between branded and generic pharmaceutical manufacturers, while in the EU data exclusivity appears to have been a stopgap solution to the lack of patent protection for pharmaceutical products in Spain and Portugal.⁶⁰ Data exclusivity was enshrined in the TRIPS Agreement, and while TRIPS does not require *sui generis* protection of such data in a U.S. or EU-like manner, the U.S. has been pushing for its preferred interpretation of TRIPS provisions to prevail by incorporating it into bilateral free trade agreements. Given the recent extension of an even longer period of data exclusivity to biologics, data exclusivity is a timely and relevant case; moreover, the apparently different processes by which data exclusivity was adopted in the U.S. and EU will help to gauge the accuracy of the hypotheses, especially the sequencing hypothesis.

Software

The U.S. Copyright Office first accepted computer programs for copyright registration and deposit in 1964; at the time, these formalities were a requirement for obtaining certain benefits of copyright.⁶¹ Unsure of how exactly to handle computer programs, the Copyright Office's initial instinct was to classify them as written works. The period throughout the 1960s up to the adoption of the substantially reformed 1976 Copyright Act saw numerous proposals to explicitly include software within the scope of copyright law; nevertheless, contemporaneous judicial decisions did not look promising for proponents of copyright in software. Scholars at the time proved skeptical of the need for copyright protection, noting that the software industry was

60 Carlos Maria Correa, "Unfair Competition Under the TRIPS Agreement: Protection of Data Submitted for the Registration of Pharmaceuticals," *Chicago Journal of International Law* 3 (2002): 69.

61 Joseph Jr Scafetta, "Computer Software Protection: The Copyright Revision Bills and Alternatives," *John Marshall Journal of Practice and Procedure* 8 (1975 1974): 383.

growing by leaps and bounds even without explicit statutory copyright protection for software.⁶² Even after the reforms codified the practice of treating software as literary works, one author noted that many software firms seemed ambivalent about copyright protection: “There is every indication that traditional legal means of proprietary protection are 'a matter of monumental insignificance to the industry.’”⁶³

The U.S. legal approach to copyright has long had a tradition of expanding coverage to new types of subject matter provided they can be reasonably analogized to existing types. However, initially there was no international agreement about this U.S.-style approach to protection for software. The Berne Convention, the preeminent international treaty on copyright, says nothing about computer programs or software; furthermore, “Other leading industrialized nations that emphasized the dual nature of software did not initially subscribe to the full copyright approach.”⁶⁴ At the time, then, it did not appear clear that the U.S. approach would eventually prevail, especially given that the World Intellectual Property Organization, with IBM's support, was promoting a *sui generis* approach to protecting software.⁶⁵

Activity at the European level came in the late 1980s, when the European Commission became concerned with harmonizing existing protection for software in European states, and requiring protection in those states that did not yet offer it. The EC's Computer Programs Directive emerged from a consultative process that involved a variety of stakeholders, but was also influenced by the already-existing U.S. policy on copyright and software. By this time,

62 Stephen Breyer, “The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs,” *Harvard Law Review* 84 (1970): 344.

63 Walter E Schmidt, “Legal Proprietary Interests in Computer Programs: The American Experience,” *Jurimetrics Journal* 21 (1981 1980): 354.

64 J. H Reichman, “Know-How Gap in the TRIPS Agreement: Why Software Fared Badly, and What Are the Solutions, The,” *Hastings Communications and Entertainment Law Journal (Comm/Ent)* 17 (1995 1994): 774.

65 Jerome H. Reichman, “Legal Hybrids Between the Patent and Copyright Paradigms,” *Columbia Law Review* 94 (1994): 2481.

Japan too had adopted legislation protecting software under copyright law, with the result that the EC faced a strong impetus to ensure its proposed directive took a copyright-style approach.⁶⁶ Thus, the software case not only represents an instance of choice between potential adoption of a *sui generis* IP right versus subsumption under existing law; it also provides an excellent opportunity to better understand how the current law of one state can affect the opportunities for reform in other states.

Table 2: Enumeration of Cases and Coding of Dependent Variable	
Geographical Indications—U.S.	Subsumption/Rejection?
Geographical Indications—EU	Adoption
Fashion Designs—U.S.	Rejection
Fashion Designs—EU	Adoption
Data Exclusivity—U.S.	Adoption
Data Exclusivity—EU	Adoption
Software—U.S.	Subsumption
Software—EU	Subsumption

In this study, random selection is not a feasible approach to case selection. Not only is there no determinate list of cases from which to choose, but given the small number of cases being studied, random selection may actually induce more bias than deliberate selection, since it

66 Alan K Palmer and Thomas C Vinje, “EC Directive on the Legal Protection of Computer Software: New Law Governing Software Development, The,” *Duke Journal of Comparative & International Law* 2 (1992): 65.

may not ensure variation in the dependent variable.⁶⁷ Thus it proves necessary to take into account the value of the dependent variable while selecting cases. This forestalls the possibility of making descriptive inferences about the dependent variable (e.g., I will not be able to answer how often states adopt/reject/subsume newly proposed IP rights), but as this study is concerned with causal inference about the process by which states react to newly proposed IP rights, this is not a major issue.

Potentially more problematic is the possibility of inadvertently selecting cases based on the values of both the dependent variable and an explanatory variable. While I do not believe that my case selection process falls into this trap, in theory selecting cases on the basis of a seemingly innocuous characteristic such as economic importance could bias my results. In order to mitigate this problem, King, Keohane, and Verba suggest “supplementing... detailed case studies with a few much less detailed cases based on secondary data... If the detailed case studies produce a clear causal hypothesis, it may be much easier to collect information on just those few variables identified as important for a much larger number of observations across countries.”⁶⁸ Thus, once research on the cases identified above has been completed, I anticipate examining other cases, including some that were initially rejected as being unimportant, to see whether the theory developed with the initial cases applies to these new cases. The new cases, which will not be used to develop the theory, may include the U.S.-EU split over database protection rights; relative harmony with regard to plant variety protection; protection for integrated circuit designs (“mask works”); the lack of IP rights in gastronomy; and the expansion of patent law to cover software and business methods.

67 Gary King, Robert O. Keohane, and Sidney Verba, *Designing Social Inquiry: Scientific Inference in Qualitative Research* (Princeton, N.J.: Princeton University Press, 1994), sec. 4.2.

68 Ibid.

Research Design

In researching the selected cases, I will employ a qualitative approach, relying primarily on documents and interviews. I will examine the usual documents relevant to legislative initiatives: internal and external analyses of the legislation, testimony by other government agencies and private parties, position papers, white papers, etc. I will also review selected scholarly and trade journals relevant to each case for references to IP rights to develop a sense of how legislative issues were viewed at the time. For the United States, a large amount of Congressional material is available online through ProQuest Congressional, and in the older cases, the Library of Congress will contain relevant material. For the European Union, I plan to visit both the European Commission archives located in Brussels, and the WIPO archive in Geneva. The WIPO archive will also be relevant to intellectual property proposals in the United States. Because resources such as written testimony can be incomplete and misleading, I will also conduct interviews with key agency and bureaucratic personnel, as well as key members of the private sector, such as representatives from trade groups and industry associations.

One particularly challenging issue is the unit heterogeneity between the U.S. and EU. The EU is not a state, and assuming without reason that the same mechanisms apply to both the U.S. and EU is unwarranted. In many areas of IP law, EU efforts are focused on harmonization of existing laws between member states. In contrast, there is no comparable effort at internal U.S. harmonization of IP law, since U.S. federal IP law preempts U.S. state legislation. EU-level dynamics of harmonization are likely to be significantly different than state-level approaches to adopting new IP rights.

However, the cases selected somewhat mitigate this problem. EU law must be codified in member states' national law, and in all the selected cases, there were multiple member states in which harmonization actually meant adopting entirely new legislation, not simply modifying existing legislation. For example, while geographical indications have a long history and well-developed protection in some EU member states (notably France, Italy, Spain), prior to EU-level harmonization, other member states (e.g., Germany and the United Kingdom) had no specific laws on geographical indications.⁶⁹ Protection for fashion designs prior to EU-level harmonization was also widely varied, with some EU members states not allowing clothing to be protected under broader industrial design laws, and other states (e.g., France) offering special seasonal protection for fashion designs.⁷⁰ When the EU adopted data exclusivity provisions in its patent law reform, regulatory test data was protected across member states as a trade secret, similar to the situation in the U.S.; thus, data exclusivity represented a new IP right for all member states.⁷¹ Finally, the initial Commission proposal for the Computer Programs Directive in the EU noted that only five EU members states (of eleven total in 1988) offered copyright protection for software.⁷² When the Directive was enacted, it had the effect of creating new IP rights in states that did not already protect software under copyright law.

Thus, in all the selected cases, EU-level harmonization actually involved the creation of new IP rights in at least some EU member states. Indeed, portraying this activity as “harmonization” is misleading. Harmonization better describes situations in which all member

69 Bernard O'Connor, *The Law of Geographical Indications* (London: Cameron May Ltd, 2004).

70 Uma Suthersanen, *Design Law in Europe* (London: Sweet & Maxwell, 2000).

71 Judit Rius Sanjuan, *U.S. and E.U. Protection of Pharmaceutical Test Data* (Consumer Project on Technology, April 12, 2006), 2, <http://www.cptech.org/publications/CPTechDPNo1TestData.pdf>.

72 “Proposal for a Council Directive on the Legal Protection of Computer Programs. COM (88) 816 Final, 17 March 1989” (1989): 39.

states already had some form of IP law, but variation in the quality and requirements of this law needed to be eliminated. Addressing the differences in copyright law within the EU is a clear case of harmonization: each member state, by virtue of belonging to the Berne Convention, would already have had copyright laws in place; EU-level harmonization addressed some of the more nuanced difference between these national laws.

Conclusion

Despite an appearance of widespread agreement on the contours and subject matter of intellectual property law among developed states, there in fact exists significant variation in IP law even between the U.S. and EU on a number of economically and politically important issues. While we would expect to see variation in IP law across the North/South divide and between developed and developing countries, transatlantic variation in IP law is more surprising. Understanding how this variation came to be—i.e., why IP rights were adopted in some cases, subsumed in some cases, and rejected in others—will reveal important information about the prospects of newly proposed IP rights, as well as other property-like or scarcity-imposing schemes.

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