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THREE QUASI-FALLACIES IN THE CONVENTIONAL UNDERSTANDING OF INTELLECTUAL PROPERTY

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In recent years the Supreme Court, Congress, and the White House have taken actions to weaken patent rights. These actions are supported by widely expressed views among legal scholars that cast doubt on the social value of robust intellectual property rights. These views rely on some combination of three core propositions: (i) IP rights raise entry barriers and increase costs to users; (ii) innovation often proceeds without IP rights; and (iii) IP rights usually or often entrench large incumbent firms. As a matter of theory and empirics (including novel evidence based on amicus briefs filed in Supreme Court patent cases during 2008-2015), I show that each of these propositions is unlikely to be true in a significant set of commercially relevant circumstances. First, IP rights can reduce entry barriers and users' costs relative to the organizational and transactional structures that markets would adopt without those rights. Second, environments that support innovation without IP rights typically rely on alternative mechanisms for securing exclusivity at some point on the relevant bundle of products and services, potentially imposing access costs and entry barriers that would not exist under a robust IP regime. Third, with the exception of the pharmaceutical industry, large integrated incumbents in technology markets usually or often oppose expanding IP rights while the opposite is often true of unintegrated, R&D-intensive (and often smaller) firms that have difficulty funding the innovation and commercialization process without IP rights. These revised propositions cast doubt on the IP-skeptical presumptions that tend to dominate scholarly, policy, and popular understandings of IP rights and drive support for legislative and judicial reforms to weaken IP rights.

INTRODUCTION

The popular, business, and political attack on intellectual property ("IP") rights is in full swing. Remarkably, almost every branch of the federal government has supported this policy shift, cutting across traditional partisan lines and encompassing significant segments of the business community. Starting with the landmark 2006 decision in *eBay Inc. v. MercExchange LLC,*[1] the Supreme Court has issued a sequence of decisions that

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have incrementally weakened the force of patent rights.[2] Most dramatically, the Court issued decisions in 2012, 2013, and 2014 that cast doubt on the validity of tens of thousands of biotechnological, medical diagnostics, software, and business method patents.[3] In 2011, Congress enacted the America Invents Act, which, among other things, made procedural reforms that provide third parties with additional opportunities to contest an issued patent or a patent application.[4] In 2013, the White House indicated that the 2011 reforms were insufficient.[5] Currently Congress is considering proposals that would, among other things, provide winning patent infringement defendants with additional tools to recover litigation fees.[6] Large technology companies such as Google, Cisco, and others—in short, the "Silicon Valley" lobby—mostly support these judicial decisions and legislative actions, as expressed through amicus briefs, policy statements, or, in the case of the now-tabled "Stop Online Piracy Act" (SOPA), mass public protest.[7]

These actions all rest on the general view that the IP system, and patent rights in particular, has been strengthened excessively to the benefit of a small group of opportunistic IP holders and to the detriment of the public at large. Relatedly, these actions often reflect the view that IP rights are not necessary to support a good deal of innovation. These increasingly prevailing views in popular, business, and policy commentary have roots in—and judicial decisions and executive branch reports sometimes cite—arguments put forward by the legal academy (and some economists).[8] There is a high

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School of Law. I am grateful for comments from participants at those venues. Comments are welcome at jbarnett@law.usc.edu. Alina Aghankhani and Quincy Chuck provided exceptional research assistance.

1 eBay, Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006) (holding that, even if patent is found valid and infringed, injunctive relief only follows subject to equitable four-factor test).

2 Some of these include: Quanta Computer, Inc. v. LG Elecs., Inc., 553 U.S. 617 (2008) (upholding patent exhaustion doctrine); KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398 (2007) (relaxing standard for finding a patent to be invalid as nonobvious); MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118 (2007) (expanding circumstances under which patent licensee may seek declaratory judgment that the licensed patent is invalid).

3 On biotechnology patents, see Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107 (2013) (denying patentability of certain isolated genetic sequences); on medical diagnostic patents, see Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289 (2012); on business method patents, see Alice Corp. Pty. Ltd. v. CLS Bank Int'l, 134 S. Ct. 2347 (2014).

4 Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

5 *See* Casey Newton, *Obama: We're Only Halfway There on Patent Reform*, CNET (Feb. 14, 2013, 2:37 PM), http://www.cnet.com/news/obama-were-only-halfway-there-on-patent-reform.

6 Innovation Act, H.R. 9, 114th Cong. (2015).

7 *See* Part III.A.1-2.

8 For representative views in this vein among legal scholars, *see generally* JAMES BESSEN & MICHAEL J. MEURER, PATENT FAILURE (Princeton U. Press 2008); YOCHAI BENKLER, THE WEALTH OF NETWORKS (Yale U. Press 2006); LAWRENCE LESSIG, FREE CULTURE (The Penguin Press 2004) [hereinafter LESSIG, FREE CULTURE]; LAWRENCE LESSIG, THE FUTURE OF IDEAS (Random House 2001) [hereinafter LESSIG, FUTURE OF IDEAS]; Diane Leenheer Zimmerman, *Copyrights as Incentives: Did We Just Imagine That?*, 12 THEORETICAL INQUIRIES L. 29 (2011); Madhavi Sunder, *IP³*, 59 STAN. L. REV.

degree of convergence between judicial decisions and the expressed policy preferences of members of the (mostly legal) academy. From January 2008 to January 2015, as shown in the Appendix, the Supreme Court issued nineteen decisions relating to patent law, almost 74% of which weakened patent rights and almost 13% of which strengthened or maintained those rights.[9] Out of the decisions that weakened patents, all but two were unanimous.[10] These results approximately match the views expressed by members of the academy (mostly law professors) in amicus briefs filed in those cases: 74% of the briefs favored the alleged infringer while 17% favored the patent holder (or applicant).[11]

Generally speaking, this IP-skeptical school of thought explicitly endorses, or implicitly rests on, some or all of the following three propositions. These propositions—some of which are of long-standing vintage in IP scholarship and jurisprudence—together cast doubt on the social value of IP rights and therefore tend to support reducing the force of those rights.

> *Proposition I: IP rights increase costs to users[12] and raise entry barriers to competitors.*
>
> *Proposition II: There is significant innovation without IP.*
>
> *Proposition III: IP rights tend to promote the interests of large incumbent firms.*

In this Essay, I show that each proposition has a substantially limited scope of application as a theoretical matter and, based on evidence drawn from a wide variety of markets, as an empirical matter.[13] I call these propo-

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257 (2006); James Boyle, *The Second Enclosure Movement and the Construction of the Public Domain*, 66 L. & CONTEMP. PROBS. 33 (2003); and among economists, *see generally* ADAM B. JAFFE & JOSH LERNER, INNOVATION AND ITS DISCONTENTS: HOW OUR BROKEN PATENT SYSTEM IS ENDANGERING PROGRESS, AND WHAT TO DO ABOUT IT (Princeton Univ. Press 2007); MICHELE BOLDRIN & DAVID K. LEVINE, AGAINST INTELLECTUAL MONOPOLY (Cambridge Univ. Press 2008).

9 The remaining three decisions had no clear adverse or positive effects, from the perspective of a patent holder. *See infra* App.

10 The remaining decisions were decided on an 8-1 and 5-3 basis. *See infra* App.

11 The remaining 9% of amicus briefs did not favor either party. For further description of this data, see *infra* Part III.A.2.

12 Unless otherwise specified, "user" refers to both end-users and intermediate users (the latter term referring to entities that use intangible goods as inputs for purposes of production or subsequent innovation).

13 This Essay consolidates and refines analyses I have presented separately that relate to each of these propositions. With respect to Proposition I, *see generally* Jonathan M. Barnett, *Intellectual Property as a Law of Organization*, 84 S. CAL. L. REV. 785 (2011) [hereinafter Barnett, *Law of Organization*] and Jonathan M. Barnett, *Is Intellectual Property Trivial?*, 157 U. PA. L. REV. 1691 (2009); with

sitions "quasi-fallacies" because, in a commercially significant set of circumstances, they overestimate the adverse effects, and underestimate the positive effects, of strong IP protection. Conversely, they underestimate the adverse effects, and overestimate the positive effects, of weak or zero IP protection. In the aggregate, these propositions support what appear to be prevailing views in legal scholarship—and by extension, judicial opinions, policy commentary, and political rhetoric—that cast doubt on the social value of IP rights or some robust version of those rights. To the extent that academic "scribblers"—to use Keynes' famous term[14]—influence actual policy actions, it is important that we rigorously evaluate these underlying propositions for theoretical and empirical coherence.

Proposition I represents the fundamental source of error. It is intuitive to think—and standard textbook analysis of IP typically states—that reducing IP rights reduces users' costs of accessing intellectual assets and lowers entry barriers for competitors. I show that the opposite is often likely to be true. Reducing IP rights can increase users' access costs and heighten entry barriers, while increasing IP rights can decrease access costs and lower entry barriers. These counterintuitive effects derive from a simple analytical principle: the effect of reducing IP rights cannot be predicted without anticipating the market response to the state's action. Subject to budget constraints, firms will react to any withdrawal of IP rights by adopting the next best set of business strategies and technological tools to assert exclusivity and support the supra-competitive pricing required to fund investments in innovation and commercialization. That weak-IP world may exhibit higher access costs and entry barriers relative to a strong-IP world. More specifically, weakening IP rights will sometimes compel firms to commercialize innovations through bundled production and distribution structures that necessitate increased capital investment, as compared to a market in which IP rights enable firms to extract value through unbundled structures. The potential result is a suboptimal world in which commercialization costs increase, entry opportunities decline, industry concentration increases, firm and market structures are distorted, and ultimately, end-users may suffer some combination of increased prices and a reduced or distorted flow of innovations.

Propositions II and III largely stand and fall with Proposition I.

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respect to Proposition II, *see generally* Jonathan M. Barnett, *The Illusion of the Commons*, 25 BERKELEY TECH. L. J. 1751 (2010) [hereinafter Barnett, *Illusion of Commons*]; with respect to Proposition III, *see generally* Jonathan M. Barnett, *Property as Process: How Innovation Markets Select Innovation Regimes*, 119 YALE L. J. 384 (2009) [hereinafter Barnett, *Property as Process*] and Jonathan M. Barnett, *What's So Bad About Stealing?*, 4 J. TORT L. 1 (2011).

14 I am referring to John Maynard Keynes' much-quoted statement: "Practical men, who believe themselves to be quite exempt from any intellectual influence, are usually the slaves of some defunct economist. Madmen in authority, who hear voices in the air, are distilling their frenzy from some academic scribbler of a few years back." JOHN MAYNARD KEYNES, THE GENERAL THEORY OF EMPLOYMENT, INTEREST AND MONEY 383 (London, Macmillan & Co. 1949) (1936).

In the case of Proposition II, commentators typically focus on environments in which innovation takes place without IP rights and then draw the conclusion that IP rights are often unnecessary. But there is a problem with this argument. Closer scrutiny shows that weak-IP or zero-IP environments typically are not property-free zones in any effective sense. Rather, firms employ alternative combinations of business strategies and technological controls to reinstate the entry barriers that would have been supplied by IP rights. Consistent with the critique of Proposition I, there is no reason to believe that those IP substitutes inherently impose lower access costs and entry barriers compared to an environment in which firms use IP rights to regulate and price access. The opposite may be the case.

In the case of Proposition III, commentators often assume that IP rights advance the interests of incumbents by raising barriers to entrants. This is consistent with natural intuitions and a long-standing "good guy/bad guy" narrative in IP policy discussions. However, it is *in*consistent with a good deal of relevant evidence in both contemporary and historical markets. With the exception of the biopharmaceutical industry, large integrated technology firms tend to resist expansions of the patent system, both today and in the past. By contrast, R&D-intensive (and typically smaller) firms that lack independent production and distribution capacities tend to favor expansions of patent rights. Consistent with the critique of Proposition I, this divergence in policy preferences across the spectrum of organizational types suggests that weakening the IP system may sometimes protect large incumbent firms that maintain integrated production and distribution structures, while raising entry barriers to entities that are often smaller and operate as stand-alone R&D entities. The former population has ample access to IP substitutes and therefore may strategically prefer a world in which IP rights are weak or absent; the latter population faces the opposite situation. While policymakers and scholars may have neglected this perverse consequence of weakening IP rights, constituencies with significant investments at stake have not and have devoted their political influence resources accordingly.

Significant changes in U.S. patent law have been made and additional significant changes are currently under consideration by courts, legislators, and other policymakers. Any sound evaluation of the net effects of changes in IP rights, as well as the different effects those changes are likely to have on different constituencies, must be dynamic, not static. That is: it must embed IP rights within the broader set of IP-like strategies available to entities engaged in various stages of the innovation and commercialization process. The interaction between rights provided by the state and functional equivalents provided by the market supplies the foundation for analyzing more precisely the complex consequences of proposed changes in IP rights.

I. PROPOSITION I: IP INCREASES COSTS TO USERS AND RAISES ENTRY BARRIERS TO COMPETITORS

This proposition holds that IP rights increase the costs associated with the production and consumption of intangible goods (or tangible goods or services that embody intangible components). This proposition might appear to be self-evident. To understand why it is not, it is helpful to break up the proposition into its underlying elements. In the textbook treatment of the economics of IP, there are two costs that are always believed to increase as IP rights are introduced or expanded: (i) the deadweight losses that arise from the supra-competitive pricing enabled by IP rights; and (ii) the costs associated with the negotiation and dispute-resolution activities that inherently arise in connection with any IP system. By implication, that means that whenever IP rights are withdrawn or weakened, it becomes less costly to consume or otherwise use the intangible goods that would otherwise be governed by those rights. That is for two reasons: (i) the suppliers of those intangible goods are forced to charge a price closer to marginal cost, given actual or threatened imitations; and (ii) other innovators[15] can use those goods to make extensions and improvements without having to pay a royalty or some other fee to avoid infringement liability. In the short term, these are desirable outcomes. The marginal cost of producing and delivering another copy of the Windows operating system is minimal and even approaches zero in digital distribution. Mass piracy would efficiently eliminate the deadweight losses generated by the above-cost pricing of Windows that persists under a robust IP regime. In the long term, however, this may be grossly *in*efficient. Marginal cost pricing means diminished expected profits, resulting in reduced R&D and fewer comparable-quality operating systems and related software applications that require approximately the same or greater levels of R&D and other investment. That countervailing concern supports the familiar economic case for IP rights, which drives pricing away from marginal cost in order to enable recovery of the fixed costs borne by the innovator and the entities that commercialize innovations.[16] As is widely recognized, whether or not any incremental extension

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15 Unless otherwise specified, throughout I use the term "innovator" to refer to entities and individuals that conceive, develop, produce, and distribute innovations. "Innovations" can refer to novel technologies or creative works.

16 The most common formulations of the economic case for IP tend to mention only or principally innovation costs. As several contributors have recently emphasized in the technology context, fixed commercialization costs typically exceed innovation costs by a large margin and must be recovered to support the efforts required to deliver an innovation to market. *See* Barnett, *Law of Organization*, *supra* note 13; Ted Sichelman, *Commercializing Patents*, 62 STAN. L. REV. 341 (2010); F. Scott Kieff, *Coordination, Property, and Intellectual Property: An Unconventional Approach to Anticompetitive Effects and Downstream Access*, 56 EMORY L.J. 327 (2006). Recently I extended this same rationale to content

of IP rights results in a net welfare gain depends on the tradeoff between, on the one hand, long-term gains from increased innovative output, and on the other hand, short-term losses from increased pricing and the transaction costs of IP-related licensing and dispute-resolution activities.

This conventional understanding of IP as a tradeoff between static and dynamic efficiency (that is, short-term and long-term gains and losses) may often overstate the above-cost pricing and transaction costs placed on the cost side of the social welfare ledger, which in turn makes the economic case for IP appear to be more tenuous than it deserves. The reason is that it is not clear that expanding IP rights typically increases access costs—defined to include supra-competitive pricing plus transaction costs—relative to any alternative *feasible* state of affairs. Specifically, it is not clear that IP rights typically compel intermediate and end-users to incur increased marginal access costs relative to the state of affairs that would be likely to exist in a market governed by weaker or no IP rights. In that alternative state of affairs, innovators will not sit with hands folded while free riders descend at will to enjoy the fruits of the innovators' labor. Nor will innovators necessarily exit the market in desperation. Rather, subject to budget constraints, innovators will seek to extract value from their existing and continued investments by relying on some combination of access-control mechanisms other than IP rights. The business management literature has described in detail, and market participants are well aware of, this rich alternative set of access controls. These include: technological obstacles to reverse engineering; brand awareness and customer loyalty; scale economies in production, marketing, and distribution; internal sources of capital; and internal know-how and other human capital.[17] Given the high fixed costs and low marginal costs that typically characterize the development, production, and distribution of intellectual assets, a viable firm engaged in innovation over the long term *must* erect some entry barrier to generate the rents that push price above the sum of marginal plus fixed costs.[18] Those market-generated entry barriers generate both supra-competitive pricing and transaction costs (imagine a user frustrated with anti-copying restrictions on a digital content file), *just like* formal IP rights

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markets. *See* Jonathan M. Barnett, *Copyright Without Creators*, 9 REV. L. & ECON. 389 (2013) [hereinafter Barnett, *Copyright Without Creators*].

17 For the principal source in the business management literature, see David J. Teece, *Profiting from Technological Innovation: Implications for Integration, Collaboration, Licensing and Public Policy*, 15 RES. POL'Y 285, 288 (1986). For an extensive description of the related literature, *see* Barnett, *Law of Organization*, *supra* note 13; Jonathan M. Barnett, *Private Protection of Patentable Goods*, 25 CARDOZO L. REV. 1251 (2004).

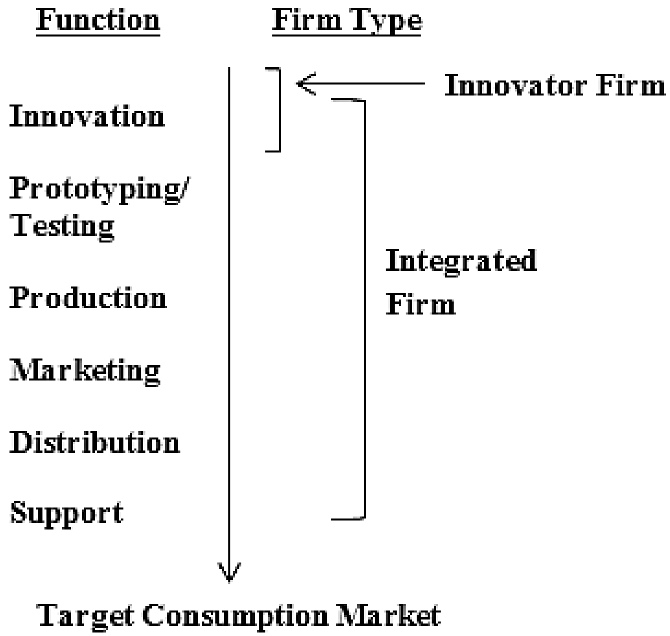
18 John Duffy observes that no market would tolerate in equilibrium marginal-cost pricing since fixed costs could not be recovered. However, he contemplates that the alternative to using IP to incentivize innovation would be some type of social subsidy system, which is consistent with the conventional assumption that a world without IP would lack any other barriers against unauthorized imitation. *See* John F. Duffy, *The Marginal Cost Controversy in Intellectual Property*, 71 U. CHI. L. REV. 37 (2004).

supplied by the state. Hence, the alternative efficient world of marginal cost pricing envisioned by the conventional understanding of IP would never persist in any environment that continued to support private investment in innovation activities. If that is the case, then the true social choice is between (i) a world with formal IP rights and some mix of transaction costs and supra-competitive pricing; and (ii) a world with functional non-IP alternatives and *some other* mix of transaction costs and supra-competitive pricing. The difference between a strong-IP and weak-IP (or no-IP) environment is a difference in degree, not kind.

Conventional analysis assumes that access costs are always higher under a weak-IP as compared to a strong-IP environment. This assumption no longer universally holds true under a dynamic analysis that takes into account market responses to changes by the state in formal IP protection. Whether access costs will rise or fall as IP rights are made stronger or weaker depends on the costs required to implement alternative non-IP mechanisms by which firms can capture returns on innovation. Over a significant range of commercially relevant circumstances, those alternative mechanisms may impose greater access costs relative to IP rights. That gives rise to the possibility that reducing IP rights may inflate the price of accessing the relevant set of technological or creative inputs, which in turn may slow down the flow of technological and creative innovations. This is not to say that upward and downward adjustments in IP rights will always have this unexpected effect. Rather, it is simply to say that, *a priori*, those adjustments may have either effect.

Below I present a more systematic framework for anticipating the effects of changes in the strength of IP rights, taking into account firms' ability to migrate toward alternative rent-extraction instruments even if the state withdraws or weakens IP rights. To structure the discussion, I will focus on two paradigmatic entity types in any technology or content environment. These are: (i) the unintegrated (and often smaller) firm that primarily undertakes R&D and other innovation activities; and (ii) the integrated (and often larger) firm that independently undertakes the full suite of innovation, production, distribution, and other commercialization activities required to deliver an innovation from lab to market. I will call the former entity, the "Innovator Firm," and the latter entity, the "Integrated Firm." As shown graphically below, these two entities are distinguished by a simple difference in scope: whereas the Innovator Firm only occupies the top of the supply chain, the Integrated Firm occupies its full length. While this two-entity menu is a simplification for analytical purposes (in particular, it does not break out the full spectrum of partially integrated firm types), these two entity types together cover the typical innovation and commercialization pathways by which technological and creative inputs are generated, embedded in consumption goods, and marketed and distributed in end-user markets.

Figure I: The Supply Chain and Firm Types

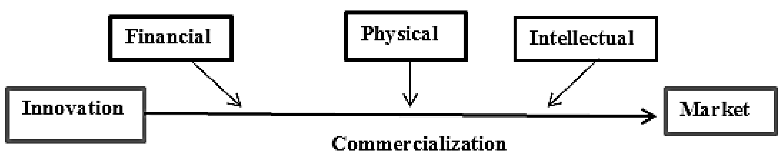


In the discussion below, I will adopt a simplifying assumption that strongly biases the discussion *against* any economic case for IP rights. Namely, I will assume that IP rights play no role in frustrating imitation upon release into the target consumption market, but do play a role in frustrating imitation at higher portions of the market supply chain. For example, this would be the case with respect to a technology that is (i) hard to reverse-engineer when embodied in a product released into retail distribution in the target consumption market, but (ii) easy to reverse-engineer when embodied in an early-stage prototype that is disclosed to investors or suppliers of production or distribution services. This assumption helps to isolate the efficiency effects of IP rights at all steps *prior* to release into the target consumption market. Even under this unrealistically IP-hostile assumption, the economic case for the necessity of IP rights holds over a significant range of commercially significant circumstances. Removing this assumption therefore simply bolsters any IP-favorable conclusions reached below.

A. *Case I: The Innovator Firm*

Consider the perspective of a profit-seeking individual or entity that holds a commercially valuable intellectual asset—for example, a new chip design, a new drug, or a new movie script. To realize the commercial value of that intangible asset, the holder must execute a host of complex and costly actions in order to translate the underlying technology or creative idea into a tangible good or service that is viable for consumption at a competitive price by the target user population. These are the "nitty-gritty" but critical tasks required to achieve commercialization, including prototyping, testing, regulatory filings, production, marketing, and distribution. As shown graphically below, reaching market release through these actions requires three types of capital inputs: financial capital, physical capital, and intellectual capital. It is precisely at this point—that is, prior to release into the target user market—that IP rights can reduce the cost of acquiring these capital inputs, thereby reducing commercialization costs and, ultimately, the price paid by end-users in the target market. Compared to the alternative state of affairs in which IP rights are absent or weaker, robust IP rights can reduce the costs borne by an innovator (or the holder of an innovation) in accessing the capital inputs required to reach market and realize the value from its investment in generating and developing its intangible assets.

Figure II: Required Capital Inputs from Innovation to Market Release



The extent to which IP rights are a precondition for commercialization by an innovator firm is a function of the extent to which the relevant technology is susceptible to expropriation by actual and potential competitors as it moves down the supply chain. In the following discussion, I first look at the case in which expropriation risk is high and IP rights enable an innovator to interact with investors and other third parties that might otherwise pose a high expropriation risk. I then look at the case in which expropriation risk is low; as I explain below, even in that case, IP rights are likely to deliver efficiency gains and facilitate the commercialization process.

1. Sub-Case I: High Expropriation Risk

Assume (reasonably in most cases) that our innovator firm lacks sufficient wealth, infrastructure, and expertise—the concrete realizations of the capital inputs mentioned above—to singlehandedly convert its novel idea into a viable consumption good and distribute that good at cost-competitive levels to a mass market. Hence, without some interaction with other parties that can supply those required inputs at a competitive cost, the idea's commercial value will remain suppressed. In seeking financial capital from an investor, lender, or some other type of business partner, the innovator must disclose at least part of its idea to a third party that has potentially adverse interests. Without that information, the prospective supplier of financial capital cannot evaluate the idea's commercial value. The same may be true to a lesser extent of suppliers of physical and intellectual capital, who may require information about the innovation in order to provide the appropriate set of capital inputs. As Kenneth Arrow famously observed, this poses a dilemma. As soon as the innovator discloses the technology, the counterparty has little incentive to continue with the transaction; rather, that counterparty will imitate the technology and seek to capture all profits for itself.[19] Having incurred the R&D costs and still lacking the required capital inputs to move down the supply chain, the innovator will be unable to compete, resulting in effective forfeiture of the innovation to the free-riding counterparty. By anticipation, the innovator declines to innovate and the innovation process stalls.

In practice, the expropriation risk that drives Arrow's dilemma, and the resulting sequence of effects leading to under-innovation, is sometimes not as severe as that stylized set-up would suggest. There are three reasons. First, repeat-play parties may have reputational incentives to forego the short-term gains from expropriating an innovator's idea in order to maximize the long-term stream of future opportunities that can be sourced from the same innovator plus all other innovators. A one-time expropriation gain may be a negative expected-value option if it cuts off a sufficiently lucrative future stream of expected revenues. Second, an innovator may be able to gradually disclose portions of his idea as the counterparty makes incremental irrevocable investments in the parties' relationship.[20] This will be most feasible in the case of technologies that require the innovator's know-how to complete the product development and commercialization process, thereby providing a powerful incentive to an investor to refrain from expropriating the innovator's technology. Third, the supplier of one type of capital input may lack sufficiently low-cost access to the other capital inputs required to commercialize the innovators' technology, in which case it does not pose a credible expropriation threat. This would probably be a fair characterization of some financial investors in a technological or creative enterprise.[21]

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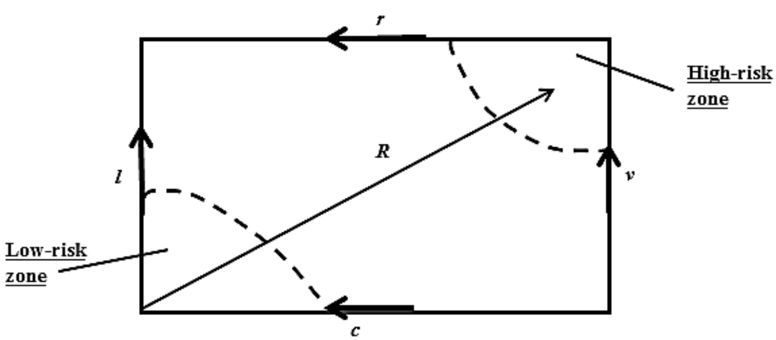
19 *See* Kenneth J. Arrow, *Economic Welfare and the Allocation of Resources for Invention*, in THE RATE OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS 609 (Nat'l Bureau of Econ. Research 1962).

20 For evidence that this occurs in certain transactions in the biotechnology industry, *see* Michael J. Burstein, *Exchanging Information Without Intellectual Property*, 91 TEX. L. REV. 227, 232-33 (2012).

21 Some but not all. A venture capital firm, for example, may pose an expropriation threat because it typically holds a portfolio of investee companies, some of which may hold the inputs required to commercialize the idea disclosed by an inventor that seeks financing from the VC firm.

Those alternative protections against expropriation risk do not render moot Arrow's dilemma. Properly understood, they imply that the severity of Arrow's dilemma, and the associated level of expropriation risk, will differ in degree depending on the relevant transactional setting. As depicted below, expropriation risk, denoted by *R,* can be understood as a function of the following factors: (i) the idea's commercial value, denoted by *v*; (ii) the counterparty's observable reputational capital (and/or incentives to acquire it), denoted by *r*; (iii) the "lumpiness" of the idea, which makes it less amenable to graduated disclosure, denoted by *l*; and (iv) the counterparty's relative costs of developing and commercializing the idea, as compared to the innovator, denoted by *c*. The expropriation risk behind Arrow's dilemma will be especially high if: (i) the idea has exceptional commercial value (which increases the expected gains from expropriation); (ii) the counterparty is not a known repeat player or cannot credibly commit to repeat play; (iii) the idea is "lumpy" and not amenable to graduated release of discrete components; or (iv) the counterparty is an operational entity that can develop and commercialize the idea at a lower cost than the innovator. Expropriation risk declines as one or more of these values tends to be reversed.

Figure III: Expropriation Risk in Information Transactions



This diagram encapsulates the chief transactional contribution of a secure IP right: it converts high-risk transactions into low-risk transactions by limiting the counterparty's ability to expropriate the innovator's idea. Subject to adoption and enforcement costs, IP rights expand the universe of counterparties with whom an innovator can contract in order to deliver an innovation to market. This function supports the typical inverted pyramid structure observed in technology and creative markets: a large population of smaller upstream firms supply R&D or creative inputs to a small group of larger downstream firms that supply scale economies in production and distribution. Take the motion picture industry: hundreds of independent content production firms, and an ever larger number of individual content suppliers (e.g., writers and other "idea" sources), partner with a small group of major studios that offer scale-efficient and difficult-to-replicate marketing and distribution capacities. Take the biopharmaceutical industry: hundreds of small biotechnology firms contract with a small number of large pharmaceutical firms that can sustain the heavy costs associated with the FDA testing process and subsequent production, distribution, and marketing tasks required to deliver a new drug to market.[22] This structural commonality across markets is not accidental. Without IP rights to block unconsented use, these transactions would be economically irrational or, at least, far more costly to execute: absent reputational constraints or a graduated disclosure mechanism, the downstream firm would expropriate the upstream firm's intangible asset at will.[23]

It might still be objected that Arrow's dilemma is a matter of limited concern since innovators can mitigate it by avoiding transactions with outside parties,[24] vertically integrating down the supply chain, and reaching the target consumption market independently.

There are two reasons why this argument is unpersuasive.

First, it assumes that the innovator has sufficient internal capital and expertise to self-execute a vertically integrated supply chain leading to market release. If that assumption is not satisfied (as would typically be the case in any economically significant undertaking), then the upstream innovator must seek external capital and expertise, which at least partially restores the expropriation risk identified by Arrow's dilemma.

Second, and even continuing to assume (unrealistically) no expropriation risk in negotiating funding from external capital sources, this argument confuses adequacy for optimality. Consider the Figure below: it depicts the full range of transactional choices available to an innovator firm as it moves down the supply chain toward market release. With respect to each commercialization function, the innovator firm can execute it internally or procure it externally by contract. Efficiency demands that the innovator construct the least-cost combination of internal and external procurement choices at every point on the supply chain. Weak or zero IP rights truncate the feasible set of transactional choices, compelling the innovator to select only the highest levels of vertical integration as denoted by the dashed lines on the extreme left-hand side of the Figure. The potential result: even if the

22 *See* Gary P. Pisano, *The Governance of Innovation: Vertical Integration and Collaborative Arrangements in the Biotechnology Industry*, 20 RES. POL'Y 237 (1991).

23 It is sometimes thought that a non-disclosure agreement could remedy the dilemma captured by Arrow's dilemma. That is erroneous: in advance of disclosure of the idea, an idea recipient may be willing to agree not to disclose the idea to other parties; however, it will never rationally agree not to *use* the idea since it may already have developed the same or a similar idea.

24 I say "mitigate" rather than "eliminate" because the innovator firm that pursues vertical integration will continue to face expropriation risk from its employees. However, that expropriation risk can be addressed in part through compensation schedules and contractual instruments such as invention assignment, non-disclosure and non-competition agreements. For more extensive discussion, see Jonathan M. Barnett & Ted Sichelman, *Revisiting Labor Mobility in Innovation Markets* (Working Paper 2016).

innovator can reach market independently and avoid expropriation risk under a weak or zero IP regime, it may have suffered increased commercialization costs by adopting over-integrated organizational forms and foregoing transactions with third parties that have comparative advantages in supplying some of the capital inputs required to reach market.[25] Transactional rigidity translates into efficiency losses: inflated commercialization costs means that consumers suffer an increase in prices, a reduced flow of innovations, or both. Restoring or increasing IP rights reverses those effects.[26]

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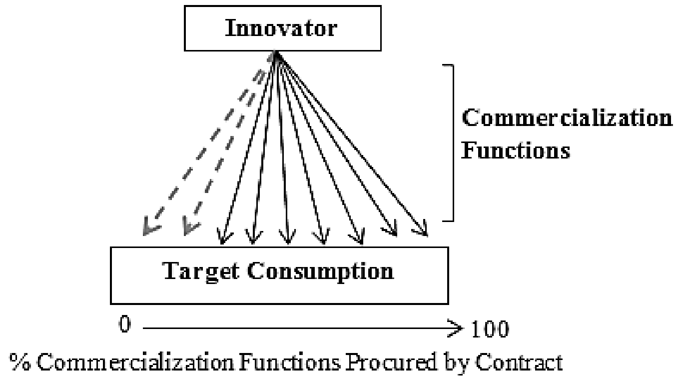
[25] A recent development concerning Rambus, a well-known "fabless" chip design company may illustrate this contingency. In 2015, Rambus announced that it would partially abandon its existing business model, which had focused on making chip designs and then licensing the patented designs to other chip designers and manufacturers. Rambus indicated that, in response to what it described as an adverse legal climate for patent enforcement, it would shift its operations to include the production and marketing of chips under its own brand. *See* Don Clark, *Rambus Expands With Its Own Chip Brand,* WALL ST. J. (Aug. 17, 2015), http://www.wsj.com/articles/rambus-expands-with-its-own-chip-brand-1439784003.

[26] For further elaboration of the relationship between intellectual property and organizational form, *see* Barnett, *Law of Organization*, *supra* note 13. That work contributes to a line of legal scholarship concerning the interaction between intellectual property rights and organizational form. This approach originated among legal scholars in Martin J. Adelman, *The Supreme Court, Market Structure, and Innovation: Chakrabarty, Rohm and Haas*, 27 ANTITRUST BULL. 457 (1982), while recent interest dates from Ashish Arora & Robert P. Merges, *Specialized Supply Firms, Property Rights and Firm Boundaries*, 13 IND. & CORP. CHANGE 451 (2004), and Dan L. Burk, *Intellectual Property and the Firm*, 71 U. CHI. L. REV. 3 (2004). For other contributions by legal scholars, *see generally* Oren Bar-Gill & Gideon Parchomovsky, *Law and the Boundaries of Technology-Intensive Firms*, 157 U. PA. L. REV. 1649 (2009); Dan L. Burk & Brett H. McDonnell, *The Goldilocks Hypothesis: Balancing Intellectual Property Rights at the Boundary of the Firm*, 2007 U. ILL. L. REV. 575 (2007); Paul J. Heald, *A Transaction Costs Theory of Patent Law*, 66 OHIO ST. L.J. 473 (2005); Kieff, *supra* note 16; Robert P. Merges, *A Transactional View of Property Rights*, 20 BERKELEY TECH. L.J. 1477 (2005); Liza Vertinsky, *An Organizational Approach to the Design of Patent Law*, 13 MINN. J.L. SCI. & TECH. 211 (2012). The business history literature has pursued a related line of inquiry, which has generated a useful body of empirical results. For an overview*, see* Naomi R. Lamoreaux & Kenneth L. Sokoloff, *Long-Term Change in the Organization of Inventive Activity*, 93 PROC. NAT'L ACAD. U.S.A. 12686 (1996).

Figure IV: Intellectual Property and Transactional Choice



2. Sub-Case II: Low Expropriation Risk

Assume again an innovator who lacks sufficient independent wealth and therefore seeks financial capital to develop a new drug. Assume further that *r* is high: that is, the potential supplier of financial capital operates under strong repeat-play considerations that will most likely recommend against imitating an idea proposed by an inventor or an entity that holds an intangible good and would like to commercialize it. Or assume that *c* is high: the potential supplier of financial capital is a non-operational entity with no technical expertise and no capacity to develop the idea without the innovator's assistance or the assistance of some other party (with respect to whom the information paradox would again obstruct negotiations). So expropriation risk is low. Those friendly settings would seem to render moot the transactional advantages ascribed above to IP rights. Not so—for two reasons.

First, a securely enforceable IP right is likely to compare favorably as a transactional tool with reputational and graduated disclosure mechanisms for protecting against expropriation risk. Unlike reputational mechanisms, an IP right does not limit the possible universe of transacting parties with whom to negotiate safely over informational assets. Unlike graduated disclosure mechanisms, an IP right does not limit the possible universe of transactional structures for negotiating over information assets. Secure IP rights enable innovators, or the holders of innovation assets, to transact freely over the entire universe of potential counterparties using the entire feasible universe of transactional structures. Of course, depending on the particular market, intellectual asset and IP right in question, this proposition loses some, but not all, of its force once we take into account the costs required to adopt and enforce IP rights.

Second, again assuming low to zero expropriation risk, an IP right still has significant value as a mechanism by which to reduce commercialization costs and ultimately, depending on competitive conditions, the price paid by the target user. The reason is uncontested in the case of real estate and other tangible goods markets: the presence of a property right provides a "hard" asset that backs up the borrower or investee's otherwise difficult-to-verify claims of positive expected returns and therefore reduces the cost of accessing external capital. This surprisingly under-discussed advantage applies with little modification to intangible goods settings. The effects can be dramatic and run directly counter to the conventional assumption that IP rights increase the transaction costs of IP-related development, production, and distribution activities.

Consider the case of Marvel Enterprises ("Marvel"). In 2005, Marvel, the famous but then-fatigued comic books franchise that had exited bankruptcy several years earlier, sought to integrate vertically forward by independently producing films based on its portfolio of "superhero" characters.[27] To secure the necessary financing, Marvel entered into a $525 million financing arrangement with Merrill Lynch.[28] Simultaneously, Ambac Assurance Corporation (Ambac), a third-party insurer, provided a guarantee under which, in the event the Marvel films did not achieve certain performance targets, Ambac would cover Marvel's outstanding interest payments and have the right to seize the supporting collateral—namely, the movie rights to the characters in the financed productions.[29] This insured financing structure supported the explosive growth of the Marvel franchise through a series of hit releases, which led to Marvel's reincarnation as a motion picture studio and subsequent acquisition by Disney for $4.3 billion in 2009.[30] This financing vividly illustrates the value created by the transactional functions of an IP right. Marvel's copyright-protected portfolio enabled it to secure the required inputs from production, distribution, and financing partners, which in turn supported content generation, marketing, and distribution activities that realized exceptional returns for shareholders and, based on the market success of Marvel's motion pictures, consumption benefits for end-users.[31]

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27 *See* Sharon Waxman, *Marvel Wants to Flex Its Own Heroic Muscles as a Moviemaker,* N.Y. TIMES (June 18, 2007), http://www.nytimes.com/2007/06/18/business/media/18marvel.html?pagewanted=print&_r=0; Devin Leonard, *Calling All Superheroes*, FORTUNE, (May 23, 2007, 1:37 PM), http://archive.fortune.com/magazines/fortune/fortune_archive/2007/05/28/100034246/index.htm.

28 *See* Form 8-K, Item 1.01, Marvel Enterprises, Inc., Securities & Exchange Commission (Aug. 30, 2005), at 2; Waxman, *supra* note 27.

29 See Form 8-K, *supra* note 28, at 2; Waxman, *supra* note 27; Leonard, *supra* note 27.

30 *See* Brooks Barnes & Michael Cieply, *Disney Swoops Into Action, Buying Marvel for $4 Billion,* N.Y. TIMES (Aug. 31, 2009), http://www.nytimes.com/2009/09/01/business/media/01disney.html.

31 *See* Waxman, *supra* note 27; Leonard, *supra* note 27.

The Marvel example is far from idiosyncratic. As could be illustrated by any one of the technology and content licensing, financing, and investment transactions entered into on a daily basis, IP rights facilitate market entry by enabling entities that have limited independent sources of wealth and/or expertise to transact safely with entities that can supply those necessary inputs and move a novel technology or creative work toward market release. By enabling transactions with an expanded pool of financing parties and lowering the innovator's cost of capital, IP rights increase entry, increase the number of competitors, and ultimately, may lower the prices paid by end-users or increase the output flowing to end-users in the target market. Withdrawing or reducing IP rights would undo or frustrate those transactions and reverse or diminish those effects.

B. *Case II: Large Firm*

Even if all the above is accepted as true, it might be objected that a large integrated firm, which typically has internal access to all three required capital inputs, would not suffer from these transactional dilemmas to any significant extent, resulting in no adverse effect on commercialization costs or the flow of innovation even in the absence of robust IP rights. Given the informational asymmetries and adverse selection effects that are widely observed to afflict transactions between innovators and outside investors (and therefore compel innovators to accept a discount even in the case of start-ups that have developed high-value technologies), internal funding for R&D is generally thought to be less costly as compared to external funding.[32] In turn, a firm with sufficient internal capital will tend to have sufficient internal expertise and infrastructure to achieve commercialization independently. That is precisely the in-house R&D, production, and distribution model largely followed by highly integrated technology firms like Apple, Intel, and once followed by formerly integrated technology firms like IBM. A firm that internalizes all commercialization functions sidesteps much of the expropriation risk inherent to negotiations over informational assets with unrelated third parties, in which case the transactional advantages ascribed above to IP rights would again appear to be moot or at least, substantially limited.

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32 *See* WILLIAM L. BALDWIN & JOHN T. SCOTT, MARKET STRUCTURE AND TECHNOLOGICAL CHANGE 13-14 (F.M. Scherer 1987). This is a more aggravated case of the "pecking order" thesis in financial economics, which states that external cost of capital usually exceeds the internal cost of capital. Reasons include: (i) in the case of debt finance, the firm must bear the cost of interest payments and the risk of bankruptcy for failure to repay; and (ii) in the case of equity finance, the firm's existing shareholders must bear the cost of dilution by new investors. None of those costs pertain in the case of internal finance. *See* Stewart C. Myers & Nicholas S. Majluf, *Corporate Financing and Investment Decisions when Firms Have Information that Investors Do Not Have*, 13 J. FIN. ECON. 187, 196-98 (1984).

That objection is unpersuasive. The "integration solution" to Arrow's dilemma may represent a merely adequate, rather than an optimal, transaction structure for innovating and commercializing innovation in the absence of IP rights. A market that responds to the absence of IP rights by funding and executing the innovation and commercialization process within self-contained integrated entities may have achieved commercialization without IP rights, but it has potentially done so at a stiff price. Specifically, the "integration solution" to supporting innovation in the absence of IP rights can generate two social harms.

1. Weak IP Rights Increase Entry Costs

"Innovation via integration" significantly, if not drastically, inflates the costs of entry into the relevant innovation market. In fact, it may inflate those costs so greatly that only a small cohort of integrated firms with large economies of scope and scale, and generous internal funding capacities, can sustain those costs. Only a small number of firms can sustain the billions of dollars, ranging from an estimated $3.5 to $10 billion, required to construct and maintain a new semiconductor chip production (known as a "fabrication" or "fab") facility.[33] In a market with IP rights, an innovator's entry costs may be drastically reduced. Now it must bear only the cost of executing the innovation functions at the top of the supply chain—for example, a "fabless" firm that has developed a new design for a semiconductor chip but lacks any other downstream commercialization capacities, and therefore contracts with third parties for production, marketing, and distribution services. In a market without IP rights, that same innovator can only expect to recover a return on its R&D investment by assembling a bundled package of innovation and commercialization inputs, which implies a greater, and potentially drastically greater, level of capital requirements with a drastically inflated level of risk. The extent of compelled bundling under a weak or zero-IP regime will depend on the extent to which expropriation risk arises at each point of the supply chain, which is in turn a function of the repeat-play factors and graduated disclosure mechanisms that may sometimes constrain expropriation risk. Given those inflated capital costs and associated entry barriers, the group of surviving firms may have secured higher levels of market power than would prevail in an environment "burdened" by strong IP rights that would lower transaction costs and enable targeted entry at discrete points on the market supply chain. Paradoxically, the absence of IP rights can provide incumbents—and specifically, firms that already maintain, or can internally fund, an independent commercialization infrastructure—with strong protection against more innovative entrants.

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[33] *See* Nicolas Mokhoff, *Semi Industry Fab Costs Limit Industry Growth*, EE TIMES (Oct. 3, 2012 3:00 PM), http://www.eetimes.com/document.asp?doc_id=1264577.

2. Weak IP Rights Distort Organizational Choices

Previously I had discussed the manner in which weak IP rights distort a small-firm innovator's organizational choices as it seeks to move an innovation along the supply chain toward market release. The same distortionary effect can apply to a large firm that has the resources to independently execute the commercialization process. The reason is one and the same. Given the reduced organizational choice set available under weak or zero IP rights, there is no longer any assurance that the organizational structures actually used to conduct and commercialize innovation represent the most efficient possible outcome. It *may* be the case that vertically integrated structures are sometimes the most efficient environment for conducting innovation and commercialization. But it will surely not always be the preferred organizational form, even for large firms with access to healthy internal capital resources. Again, take the semiconductor market. Intel, the world's largest semiconductor manufacturer (market capitalization of $140.6 billion as of January 20, 2016)[34] uses a vertically integrated model that typically executes each stage of the innovation and commercialization process through manufacture and distribution. By contrast, Qualcomm, the world's leader in the supply of semiconductors for cellphones and smartphones (market capitalization of $69.3 billion, as of January 20, 2016),[35] has adopted a vertically dis-integrated model in which it mostly focuses on chip design and extracts revenues through downstream licensing to handset and other device manufacturers. In other cases, Qualcomm contracts with third-party foundries for manufacturing and other services at intermediate points in the supply chain.[36] Without patents, Qualcomm could not safely enter into transactions with hardware manufacturers or foundries, which would in turn compel the adoption of vertically integrated structures to limit knowledge leakage in the commercialization process.

Any market in which firms have adopted vertical integration as a response to expropriation risk under a weak or zero-IP regime—and therefore appears to support innovation without significant reliance on IP rights—may be operating under inefficiently high levels of vertical integration. This will *necessarily* be the case to some extent with respect to any firm that is not the least-cost provider of every function in the innovation and commercialization process. The result is a reversal of the standard proposition that reflexively associates reduced IP with reduced costs. Whenever innovators respond to the absence of IP rights by adopting integrated organizational structures, commercialization costs have potentially increased relative to the structures that would have been feasible under a stronger

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34 YAHOO! FINANCE, HTTP://FINANCE.YAHOO.COM/.

35 YAHOO! FINANCE, HTTP://FINANCE.YAHOO.COM/.

36 Form 10-K, Qualcomm Inc. (Fiscal Year Ended Sept. 28, 2014).

level of IP protection. Increased commercialization costs may be reflected in inflated prices paid by users of the relevant intangible goods (or the tangible goods in which those intangible components are embedded), restricted output, and/or a reduced flow of innovations. Re-introducing or expanding IP rights reverses those effects, potentially resulting in lower prices, expanded output, and/or an increased flow of innovations.

II. PROPOSITION II: THERE IS SIGNIFICANT IP WITHOUT IP

This proposition holds that there are a significant number of markets in which intellectual production proceeds at robust levels but IP rights are absent. The importance of this observation is that it suggests or shows that IP rights are unnecessary because innovation would and does proceed even when those rights are compromised or entirely absent.

This line of thought appears to largely derive from an influential article published in 1970 by now-Justice Stephen Breyer, who identified mechanisms by which U.S. publishers in the 19th century successfully earned profits on foreign literary works even when U.S. law denied copyright protection to those works.[37] Following Justice Breyer's lead, other commentators have documented various examples to illustrate that IP can be sustained without IP, or without robust IP rights. These include: fashion design and luxury goods[38], gourmet cuisine,[39] academic research,[40] open-source software,[41] magic performances,[42] stand-up comedy routines,[43] roller derbies,[44]

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37 *See* Stephen Breyer, *The Uneasy Case for Copyright: A Study of Copyright in Books, Photocopies, and Computer Programs*, 84 HARV. L. REV. 281, 299-300 (1970). Those mechanisms principally included: (i) the natural lead time advantage enjoyed by the first publisher; and (ii) "fighting editions"—that is, the practice of selling a book at unsustainably low prices in response to piracy.

38 *See* KAL RAUSTIALA & CHRISTOPHER SPRIGMAN, THE KNOCKOFF ECONOMY: HOW IMITATION SPARKS IMITATION 19-55 (2012) [hereinafter RAUSTIALA & SPRIGMAN, KNOCKOFF ECONOMY]; Kal Raustiala & Christopher Sprigman, *The Piracy Paradox: Innovation and Intellectual Property in Fashion Design*, 92 VA. L. REV. 1687, 1693-1704 (2006) [hereinafter Raustiala & Sprigman, *Piracy Paradox*].

39 *See* Emmanuelle Fauchart & Eric von Hippel, *Norms-Based Intellectual Property Systems: The Case of French Chefs*, 19 ORGANIZATIONAL SCI. 187, 191-92 (2008).

40 *See* LESSIG, FUTURE OF IDEAS, *supra* note 8; Arti Kaur Rai, *Regulating Scientific Research: Intellectual Property Rights and the Norms of Science*, 94 NW. U. L. REV. 77, 95 (1999).

41 *See* BENKLER, *supra* note 8; LESSIG, FUTURE OF IDEAS, *supra* note 8; Yochai Benkler, *Coase's Penguin, or, Linux and the Nature of the Firm*, 112 YALE L.J. 369, 371 (2002); Boyle, *supra* note 8.

42 *See* Jacob Loshin, *Secrets Revealed: How Magicians Protect Intellectual Property Without Law*, *in* LAW AND MAGIC 125-27 (Christine A. Corcos ed., 2010).

43 *See* Dotan Oliar & Christopher Jon Sprigman, *Intellectual Property Norms in Stand-Up Comedy*, *in* THE MAKING AND UNMAKING OF INTELLECTUAL PROPERTY: CREATIVE PRODUCTION IN LEGAL AND CULTURAL PERSPECTIVE 386-89 (Mario Biagioli et al. eds., 2010).

44 *See* David Fagundes, *Talk Derby to Me: Intellectual Property Norms Governing Roller Derby Pseudonyms*, 90 TEX. L. REV. 1093, 1108-13 (2012).

and online fan fiction.[45] Some interpretations of these phenomena, including the interpretation originally advanced by Justice Breyer,[46] have gone further and argued that these peripheral cases cast doubt on the core economic case for IP rights.[47] That is, it may be the case that innovation would proceed robustly without IP rights, or without robust versions of IP rights, in a large number of other markets or in markets generally.

This expansive interpretation runs into two difficulties. First, it overlooks the fact that examples of "IP without IP" usually describe environments that have few applications to capital-intensive and commercially significant innovation markets. Second, and more fundamentally, this interpretation overlooks the fact that these examples usually make some disguised use of IP rights or a functionally equivalent access-control mechanism. Relatedly, this interpretation overlooks the possibility—just as Proposition I overlooked the possibility—that these alternative access-control mechanisms may impose greater access costs and higher entry barriers relative to a market in which IP rights were stronger.[48]

A. *Intrinsic Motivation*

As suggested by the examples listed above, the "IP without IP" proposition mostly finds support in non-commercial, artisanal, or other settings in which intrinsic motivation is sufficient to support incentives to engage in creative or technological innovation. Take the oft-repeated example of online fan fiction. It is not surprising to learn that intrinsically motivated creators do not require the "carrot" of copyright to engage in writing or other forms of creative expression, perhaps so long as an attribution norm is respected. But that observation has few implications for creative and technological activities that require significant participation by non-creative and non-innovator entities to mass-produce, mass-market, and mass-distribute the relevant item. Intrinsic motivation and reputational capital will not provide sufficient incentive for the mundane but necessary activities without

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45 *See* Rebecca Tushnet, *Payment in Credit: Copyright Law and Subcultural Creativity*, 70 L. & CONTEMP. PROBS. 135, 140 (2007).

46 *See* Breyer, *supra* note 37, at 299-300.

47 *See* BENKLER, *supra* note 8; RAUSTIALA & SPRIGMAN, KNOCKOFF ECONOMY, *supra* note 38; Michael A. Carrier, *Cabining Intellectual Property Through a Property Paradigm*, 54 DUKE L.J. 1, 31-34 (2004); Sunder, *supra* note 8; Zimmerman, *supra* note 8; *see also* Rochelle Cooper Dreyfus, *Does IP Need IP? Accommodating Intellectual Production Outside the Intellectual Property Paradigm*, 31 CARDOZO L. REV. 1437, 1447-52 (2010) (with some qualification).

48 For fuller discussion of the following points, *see generally* Barnett, *Illusion of Commons*, *supra* note 13. For some of the reasons identified above, Robert Merges expresses similar skepticism about the implications of these examples for IP rights in general. *See* Robert P. Merges, *Economics of Intellectual Property Law* (Mar. 2014), *in* OXFORD HANDBOOK OF LAW AND ECONOMICS (Francesco Parisi ed. forthcoming) [hereinafter Merges, *Economics*].

which creative and technological goods typically cannot reach market on a mass scale. Take the example of open-source software, which is assembled through contributions from volunteer programmers and then released at no charge. It is suggestive that the Linux operating system, the most well-known open-source software application, has achieved low rates of penetration into the desktop computing market (less than 2% as of December 2015),[49] even though it offers several hundred dollars in up-front savings relative to Microsoft Windows. As I have described elsewhere in greater detail, the principal reason appears to be (in somewhat simplistic terms) that Linux lacks an operating manual and a post-purchase support system.[50] That is, providing a competitive alternative to Windows would require undertaking the "heavy lifting" required to deliver the updating and support functions that unsophisticated individual and small-business users demand, but from which volunteer programmers can derive little intrinsic satisfaction.[51] The failure of Linux to capture market share in the consumer PC market even at a *zero* sales price generalizes to a host of other innovation markets. Even if creative artists or research personnel derive sufficient intrinsic motivation to engage in artistic production or technological innovation without any supplemental monetary incentive (beyond, I assume, compensation sufficient to buy lunch and pay rent), the absence of a significant expected profit stream will discourage the remaining pool of non-creative participants that must execute the production, marketing, distribution and other tasks that are typically required to deliver a viable product to a mass consumption market.

B. *Capital Requirements*

The "IP without IP" proposition tends to describe environments in which creative or technological activity does not require significant capital investment. Consider an example such as academic writing, which operates in a weak-IP environment because the ideas in those works are generally unprotected and can freely be used subject to compliance with an attribution custom that supports the industry's reputation-based credit system. It

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49 NETMARKETSHARE, DESKTOP OPERATING SYSTEM MARKET SHARE, http://marketshare.hitslink.com/operating-system-market-share.aspx?qprid=8&qpcustomd=0 (last visited Jan. 8, 2016).

50 *See* Jonathan M. Barnett, *The Host's Dilemma: Strategic Forfeiture in Platform Markets for Informational Goods*, 124 HARV. L. REV. 1861, 1898-2000 (2011) [hereinafter Barnett, *Host's Dilemma*].

51 There is a potentially selfish motivation behind developers' relative unwillingness to invest in support and documentation functions, as compared to programming functions. Investment in the latter function enhances the programmer's reputational capital in the relevant labor market and enables the programmer to acquire greater technical skills, in both cases leading to potential income-producing opportunities in the future. None of this would be true of investments in non-technical functions.

is not surprising to learn that copyright is not required to incentivize a law professor to engage in academic research, because (i) as noted above, it is an intrinsically satisfying activity; (ii) it generally does not require significant capital investment; (iii) it generally has little commercial value; and (iv) its authors earn revenue from an alternative source (namely, a tuition-supported, philanthropically supported, and taxpayer-supported academic institution). Hence, law professors typically license their copyright for no compensation when a paper is accepted for publication. Without significant capital requirements, there is no imperative to exercise the pricing power required to generate a stream of funds to cover those requirements. If we further assume that the innovator is intrinsically motivated, then there is no imperative to obtain the pricing power associated with IP rights. And if we further assume that the innovator's work typically has little commercial value, then there is no pricing power that IP rights could secure under any plausible scenario. However, when these three characteristics are no longer satisfied—that is, innovation or commercialization requires significant capital, extrinsically motivated parties are required to complete commercialization, and there is significant commercial value at stake—then the case for IP re-emerges with force.

This is a critical qualification because it implies that, as *any* innovation market grows and expands, it will require some form of IP to induce rational investment of the financial, physical, and intellectual capital typically required to achieve production and distribution into lucrative mass markets.[52] This can be illustrated by returning to the example of academic research. While academic research thrives with weak or zero levels of formal IP (albeit with the support of substantial tax-based and philanthropic transfers), subject to the academic community's strong attribution norms, universities' technology transfer offices are active adopters of patent rights. The reason is an especially direct implication of Arrow's paradox: without patents, universities, which are legally constrained as non-profit entities from integrating forward into commercial production, cannot transact with the third parties that must be engaged to extract economic value from the fruits of a university's R&D activities.

C. *The "No Free Lunch" Principle*

Most fundamentally, the "IP without IP" proposition over-counts the markets in which innovation proceeds but the market is allegedly bereft of IP rights or other access barriers. According to typical characterizations, in lieu of the self-interested commercial incentives that purportedly necessitate IP rights and associated barriers to imitation, participants in these sharing environments apparently find sufficient motivation in some mix of intrinsic

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52 For a similar observation, *see* Merges, *Economics, supra* note 48.

and reputational benefits.[53] This observation may be true of certain amateur, artisanal, or academic environments. However, it does not survive closer scrutiny in commercially significant environments. Typically, these weak-IP or zero-IP markets rely on some combination of tax-funded or philanthropic subsidies, some other form of IP rights, or a functional equivalent of IP rights to generate the revenues required to fund innovation activity. This is a simple implication of the "no free lunch" principle of Economics 101. Without IP rights to generate the rents required to cover the fixed costs of innovation and commercialization, innovators, or the holders of innovation assets, must have recourse to other mechanisms to generate rents that will cover production and distribution costs and earn a return that at least equals the next best investment opportunity. Hence, whenever capital requirements pass a significant threshold, any claim that a market somehow supports innovation without IP rights must be scrutinized with extreme caution. In all likelihood, absent tax or philanthropic subsidies, access is being regulated with respect to some point on the relevant innovation asset or some other portion of the aggregate products/services bundle in which that asset is embedded.

1. Subsidies

Some of the markets that generate innovation without the "carrot" of formal IP rights are supported by generous government or philanthropic transfers. For example, literary and musical production in Western Europe prior to the robust implementation of copyright relied primarily on state, church, and private patronage mechanisms.[54] Capital-intensive but weak-IP innovation environments like university scientific research do not show that individuals and entities will invest effort in innovation without any prospect of financial return. In the U.S., that return is being artificially supplied through billions of dollars in transfers funded by private altruism, tax transfers, and/or government procurement. In 2015, the federal government allocated $132.25 billion to research and development activities, including activities undertaken directly by government agencies or allocated to public and private research institutions.[55] Of that amount, $31.46 billion was allocated to basic research.[56] The two principal sources of government funding for academic scientific research, the National Institutes for Health and the

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53 For the leading sources, *see* Benkler, *supra* note 8; Benkler, *supra* note 41. *See also* LESSIG, FUTURE OF IDEAS, *supra* note 8; Boyle, *supra* note 8.

54 *See* F.M. SCHERER, QUARTER NOTES AND BANK NOTES (2004).

55 NAT'L SCI. FOUND., NAT'L CTR. FOR SCI. & ENG'G STATISTICS, SURVEY OF FED. FUNDS FOR RESEARCH & DEV., TABLE 2, SUMMARY OF FEDERAL OBLIGATIONS AND OUTLAYS FOR RESEARCH, DEVELOPMENT, AND R&D PLANT:, FYS 2012-15 (2015).

56 *Id.*

National Science Foundation, were allocated (by preliminary estimates) $29.39 billion and $5.74 billion, respectively.[57] This is a simple point but surprisingly overlooked in scholarly discussions that sometimes use the example of academic scientific research to dismiss the necessity for IP rights.

2. Other IP

Some of the markets that are typically cited in support of the "IP without IP" proposition make some use of IP rights with respect to some element of the total products/services bundle in which the relevant intellectual good is embedded. This can be illustrated by the fashion industry. It is often stated that the fashion industry operates successfully without robust IP rights.[58] This is a mischaracterization—the fashion industry operates under a partial IP regime that provides strong protection for trademarks, moderate copyright protection for images, and weak trade dress and copyright protection for stylistic and other design elements. Even formally weak protection for design elements may be stronger than might appear from the "law on the books" since firms with sufficient litigation resources can extract settlements even on the basis of claims that might not be enforceable if fully adjudicated. Consistent with this expectation, textile firms often file lawsuits alleging copyright and trade dress violations by apparel firms.[59] In the retail segment of the supply chain, branded apparel firms actively enforce their trademarks, which can protect a clothing brand and preserve the firm's goodwill assets.[60] The reason is simple: an aesthetically identical handbag without the Gucci mark is not a competitive substitute for the same handbag with the Gucci mark. A simple comparison of the prices paid for authentic and pirated versions of a branded designer handbag (the former bearing the mark and the latter typically not bearing the mark or bearing a distinguishable variant) would demonstrate that proposition.[61] That large price differential supports a basic proposition: so long as the name and logo are protect-

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57 *Id.,* TABLE 4: FEDERAL OBLIGATIONS AND OUTLAYS FOR RESEARCH AND DEVELOPMENT, BY AGENCY: FYS 2012-15.

58 *See*, *e.g.*, RAUSTIALA & SPRIGMAN, KNOCKOFF ECONOMY, *supra* note 38; Raustiala & Sprigman, *Piracy Paradox*, *supra* note 38.

59 *See* Jonathan M. Barnett, Gilles Grolleau and Sana El-Harbi, *The Fashion Lottery: Cooperative Innovation in Stochastic Markets*, 39 J. LEGAL STUD. 159 (2010).

60 *See id.*

61 *See* Boonghee Yoo & Seung-Hee Lee, *Buy Genuine Luxury Fashion Products or Counterfeits?*, *in* 36 ADVANCES IN CONSUMER RESEARCH 280 (Ann L. McGill & Sharon Shavitt eds., 2009) (noting that "counterfeits' prices are a mere fraction of genuine items' prices").

ed, the innovator can secure a premium on its creative investment even if a large portion of its innovation is left open to imitation by third parties.[62]

3. IP Equivalents

In some cases, it is true that there is little use of formal IP rights with respect to any portion of the relevant products/services bundle and no subsidies forthcoming from governmental or philanthropic sources. Even in those cases, however, closer scrutiny tends to identify a functional equivalent by which a firm can regulate access and generate the exclusivity premium that can fund its R&D and commercialization investment.

To illustrate, let us return to the example of open-source software. Open-source software, which relies on contributions from volunteer programmers, is released to users at no charge and allows for unlimited copying—usually subject to the condition that any "derivative" applications are distributed under the same terms. Linux, the open-source operating system, has achieved significant penetration in the industrial server market[63] (but not, as noted earlier, the consumer PC market) [64] and would appear to be, and is commonly described as, a phenomenon that casts doubt on the incentive-based justification for IP rights.[65] But closer scrutiny paints a more complex picture. Survey evidence from 2002 found that roughly half of all open-source programmers were employed or sponsored by for-profit corporations.[66] As of 2009, approximately 70% of total code contributions to the Linux operating system project—the most successful open-source application—were made by developers employed by for-profit companies.[67] Elsewhere I have provided detailed evidence showing that Linux and certain

62 Elsewhere I and co-authors (*see* Barnett et al., *supra* note 59) have argued that high-end apparel firms rationally prefer weak IP protection for design elements because it facilitates a collective risk-sharing regime by which apparel firms place "design bids" within a confined range of possible prevailing designs in each season. As we emphasized, however, this does not mean that design firms prefer zero protection (which would eliminate all rents for the prevailing bidder in each seasonal design competition) and does imply (correctly) that high-end firms would pursue infringement actions against lower-end firms that do not incur the costs of placing design bids in the form of design and marketing expenditures.

63 Linux servers represented almost 21% of all server revenue, as of the first quarter of 2012. *See* David Nagel, *Linux Leads Server Growth,* THE JOURNAL (Jun. 5, 2012), https://thejournal.com/articles/2012/06/05/linux-based-systems-lead-server-growth.aspx (citing IDC report).

64 *See supra* note 53.

65 BENKLER, *supra* note 8; Benkler, *supra* note 41; Boyle, *supra* note 8.

66 *See* Rishab A. Ghosh et al., FLOSS, *Free/Libre and Open Source Software: Survey and Study*, FLOSS (June 2002), http://www.flossproject.org/report/FLOSS_Final4.pdf.

67 *See* Greg Kroah-Hartman et al., The Linux Foundation, *Linux Kernel Development: How Fast It Is Going, Who Is Doing It, What They Are Doing, and Who Is Sponsoring It: An August 2009 Update*, THE LINUX FOUNDATION (Aug. 2009), http://www.linuxfoundation.org/sites/main/files/publications/whowriteslinux.pdf.

other leading open-source software projects are substantially governed, funded, and staffed by personnel employed or contributed by for-profit software, hardware, telecom, and other technology firms.[68] Consistent with standard expectations of economically rational behavior, the "heavy lifting" required to implement a commercially viable technology requires the revenue streams generated by firms that are motivated by standard profit incentives.

The extensive involvement of for-profit firms in some of the most successful open-source software projects is the key to appreciating why this often-cited phenomenon is *not* an example of "IP without IP." For-profit firms donate extensive personnel and capital to open-source projects because it enables those firms to earn revenue on complementary products and services in which they hold a competitive advantage. Consider IBM: it has reportedly contributed in excess of $1 billion to the open-source Linux operating system project and maintains hundreds of programmers on staff to maintain and improve Linux.[69] This apparently altruistic course of action has a rational profit motive. For IBM, a free open-source operating system provides an alternative to the Microsoft Windows operating system in the server market. If users do not have to pay a license fee to Microsoft, then users will prefer, and be willing to pay more for, the hardware on which the free substitute operating system runs.[70] Not coincidentally, IBM is the leader in the market for server hardware,[71] and its products run on the Linux operating system. Hence, while it is true that Linux is being given away and no programmer is being compensated directly for participating in its development, this apparently cooperative enterprise is funded at least in part because sponsoring for-profit firms can assert exclusivity with respect to some other element of the total products/services bundle in which Linux is embedded. Precisely understood, Linux does not show that IP can be produced without IP; rather, it shows that intellectual assets can be profitably produced by giving away those assets *and* shifting the point at which exclusivity is asserted to some other component of the relevant bundle of products and services.

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68 *See* Barnett, *Host's Dilemma, supra* note 50, at 1906-13.

69 *See* Barnett, *Illusion of Commons*, *supra* note 13, at 1810-11; Barnett, *Host's Dilemma, supra* note 50, at 1910.

70 *See* Barnett, *Illusion of Commons*, *supra* note 13, at 1811; Barnett, *Host's Dilemma, supra* note 50, at 1911-12; Ronald J. Mann, *Commercializing Open Source Software: Do Property Rights Still Matter?*, 20 HARV. J.L. & TECH. 1 (2006).

71 *See* Chuck Jones, *IBM Regains #1 Server Market Share Position*, FORBES (Aug. 29, 2013, 10:20 AM), http:// http://www.forbes.com/sites/chuckjones/2013/08/29/ibm-regains-1-server-market-share-position.

D. *A "So What" Objection*

This line of argument might raise the following objection. If the market can support innovation without using a full-fledged suite of IP rights, are we not better off without those rights and the associated suite of social costs? Justice Breyer essentially made this argument in 1970 when he argued that the case for copyright was "uneasy" because there were alternative mechanisms for publishers to earn revenues even in the absence of copyright protection.[72] As a Supreme Court Justice, he repeated the same argument in the landmark copyright infringement case, *MGM v. Groskter*, when he argued that weakened copyright protections for recorded music would not cause significant social harm because artists can earn revenues through live performance.[73]

This type of argument suffers from a basic oversight. We do not learn much about the necessity of IP rights based merely on the observation that there exist revenue models that can generate funding for innovation in the absence of IP rights (or in the absence of robust IP rights). In particular, this argument repeats the fundamental error embedded in Proposition I: that is, it overlooks the possibility that using non-legal alternatives to IP may exceed the social costs of using formal IP rights to capture returns on innovation. Consider once again open-source software. Assume for simplicity that IBM is successful in inducing complete migration of the server market to the zero-priced Linux platform, with respect to which IP rights have been largely waived. Are server consumers made better off by this effective reduction in IP rights? This is implicitly assumed by most characterizations of open-source software.[74] But that is not necessarily the case. Obviously users will enjoy drastically reduced costs with respect to the operating system component of the server/OS bundle, which is now available at no charge.[75] Even in the short term, however, users' total cost burden may be unchanged or even increased if eliminating a positive fee for the operating system component enables dominant suppliers of server hardware—a remaining proprietary element in the products/services bundle—to profitably raise prices. In the long term, things may be even worse: the zero price for the existing dominant operating system means that any entrant into that

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72 *See* Breyer, *supra* note 37, at 351.

73 Metro-Goldwyn-Mayer Studios Inc. v. Grokster, Ltd., 545 U.S. 913, 961-62 (2005) (Breyer, J., concurring).

74 *See, e.g.*, Amy Kapczynski, *The Access to Knowledge Mobilization and the New Politics of Intellectual Property,* 117 YALE L.J. 804, 830-31 (2008); Benkler, *supra* note 38, at 446.

75 This is a simplification. Users may incur higher implementation and maintenance costs when adopting an open-source software product, which generally is not accompanied by the extensive support features that are offered together with a proprietary software application. Some industry sources claim that total adoption and maintenance costs can sometimes be higher in the case of open-source software applications. *See* Barnett, *Host's Dilemma, supra* note 50, at 1928 n.216.

market can only generate revenue by offering either some other complementary good or service or, if it wishes to charge a positive price for the new operating system, a drastically superior product. The result: the costs of entry into the operating system market are increased relative to a state of affairs in which firms use IP rights to extract returns directly through positive "stand-alone" pricing of the operating system component.

III. PROPOSITION III: IP PROTECTS LARGE INCUMBENT FIRMS

This proposition holds that strong IP rights usually favor large incumbent firms, who lobby for stronger IP in order to extract higher prices from consumers and to erect entry barriers to competitors. By implication, that intuition suggests that the public interest tends to demand weaker IP rights in order to counteract the influence of large concentrated corporate interests that otherwise run roughshod over the poorly represented interests of small dispersed firms and consumers. These intuitions, which animate some recent scholarship and a good deal of popular commentary on IP rights,[76] have a long history, dating back at least to landmark congressional hearings held in the late 1930s and early 1940s concerning the allegedly dominating influence of patent trusts accumulated by large corporations in a variety of industries.[77] The result was a multi-decade period extending through the early 1980s in which patent rights were weakened and patent holders had little confidence that patents would be upheld when enforced in infringement litigation.[78]

There is one small problem with this popular (and populist) narrative. The assumption that strong IP necessarily or usually promotes corporate interests does not track the tendencies generally observed in corporate interests' lobbying and other political-economic behavior relating to IP law.

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76 *See* LESSIG, FREE CULTURE, *supra* note 8; LESSIG, FUTURE OF IDEAS, *supra* note 8; JESSICA LITMAN, DIGITAL COPYRIGHT (2001); Boyle, *supra* note 8; James Boyle, *A Politics of Intellectual Property: Environmentalism for the Net?*, 47 DUKE L.J. 87 (1997); Kapczynski, *supra* note 63. This assumption drives much of the arguments in Levine & Boldrin, *supra* note 8, who generally view IP rights as an unjustified monopoly franchise awarded to rent-seeking corporate interests. For representative discussion of academic and activist conferences and organizations that advocate for weaker IP rights in order to protect the "public interest," *see* Sean M. Flynn, *The Washington Declaration on Intellectual Property and the Public Interest,* 28 AM. U. INT'L L. REV. 19 (2012).

77 For the principal sources, *see*: (i) POOLING OF PATENTS: APP. TO HEARINGS BEFORE THE COMM. ON PATENTS, HOUSE OF REPRESENTATIVES ON H.R. 4523, 74TH CONG. (1935); (ii) U.S. CONGRESS, TEMPORARY NATIONAL ECONOMIC COMMISSION, INVESTIGATION OF CONCENTRATION OF ECONOMIC POWER: HEARINGS*,* 75TH–76TH CONG. (1938-1940); and (iii) PATENTS: HEARINGS ON S. 2303 AND S. 2491 BEFORE THE S. COMM. ON PATENTS, 77TH CONG. (1942).

78 *See* 1 DONALD S. CHISUM, CHISUM ON PATENTS §OV-9 to §OV-12 (1993). For systematic data that support this observation, *see* Matthew D. Henry & John L. Turner, *Across Five Eras: Patent Enforcement in the United States 1929-2006* (Working Paper 2013) [hereinafter Henry & Turner, *Five Eras*].

Surprisingly, with the notable exception of the pharmaceutical market, large-firm constituencies in technology markets tend to favor weaker IP rights. This assertion may seem surprising, but data relating to large-firm lobbying behavior clearly demonstrate these tendencies with respect to patent policy since the early 1980s and several historical examples illustrate these tendencies with respect to earlier periods. At least in the short term, some of the largest corporate firms have interests that are largely aligned with the short-term interests of the consumer, who is therefore represented through these well-resourced proxies in judicial and legislative venues. This surprising preference for weak IP rights is anticipated by a dynamic analysis that takes into account both alternative mechanisms for extracting value from innovation assets and firms' differential costs in deploying those mechanisms. Integrated firms have low-cost access to a rich menu of non-IP monetization strategies and therefore have weak demand for IP rights and strategic incentives to resist the expansion of those rights. Those interests, and corresponding policy preferences, are reversed in the case of entities that operate under weakly integrated innovation and commercialization models and do not have cost-comparable access to non-IP monetization strategies.

A. *Evidence: Political Influence Investments by IP Constituencies*

Evidence on technology firms' investments in political influence supports an approximately inverse correlation between the level of organizational integration and demand for strong IP protections. With the important exception of the pharmaceutical industry (discussed further below), firms that use integrated organizational forms tend to support weaker IP rights, or even oppose them altogether, while firms that use unbundled organizational forms tend to support stronger IP rights. This tendency is especially clear as evidenced by (i) amicus briefs filed in patent litigation since the early 1980s through the present and (ii) lobbying activities in that same period with respect to patent reform in general and software and financial-method patents in particular. This behavior does not seem to be peculiar to the present. In the late-19th century, large U.S. railroad firms lobbied successfully to overturn a judicial doctrine that had resulted in large patent infringement awards.[79] At New Deal-era congressional hearings, the presidents of industry incumbents such as Bell Labs[80] and General Motors[81] stated that patents

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79 *See* STEVEN W. USSELMAN, REGULATING RAILROAD INNOVATION 144-76 (2002).

80 *See* INVESTIGATION OF CONCENTRATION OF ECONOMIC POWER, HEARINGS BEFORE THE TEMPORARY NAT'L ECON. COMM., U.S. CONG., 75TH CONG. 958 (1939) (statement of Frank Jewett, President of Bell Laboratories, that, as Bell Labs has grown in size, it no longer relies on patents to support R&D).

were not especially important to support R&D and the president of Ford Motor Co.[82] described how Ford and the automotive industry benefited from relaxed licensing and enforcement of patents. Consistent with the proposed inverse correlation between demand for IP rights and the level of vertical integration, the parts and accessories manufacturers that supplied the automotive industry—equivalent to stand-alone suppliers of upstream inputs—took the opposite position, supporting strong protection for patentees.[83]

1. Contemporary Patent Reform (Late 1990s-Present)

This correlation between organizational form and the demand for IP rights can account for patterns in contemporary debates over patent reform. With some exceptions, large integrated technology and financial services companies have tended to express positions in support of legislative reforms and judicial decisions that weaken patentees' rights. These reforms include the America Invents Act, enacted in 2011, which (among other things) expanded opportunities to contest the validity of a patent,[84] and currently proposed reforms that would (among other things) facilitate shifting of attorneys' fees in patent infringement litigation.[85] Conversely, with some exceptions, large and small firms in the biotechnology and pharmaceutical industry, small firms in the information technology industry, academic research institutions, and individual inventors have tended to oppose those steps.[86] The same is true of some prominent venture capital firms.[87] While

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81 *See id.* at 337 (William S. Knudsen, President, Gen. Motors Corp., agreeing with the statement that "the big industries would like to carry on their research without the patent law").

82 *See* INVESTIGATION OF CONCENTRATION OF ECONOMIC POWER, HEARINGS BEFORE THE TEMPORARY NATIONAL ECONOMIC COMMITTEE, U.S. CONG., 75TH CONG. 257-58, 274, 284 (1938) (statement of Edsel Ford, President, Ford Motor Co., describing Ford's zero-royalty open licensing policy and stating that this has operated to benefit of Ford and industry as a whole).

83 GEORGE E. FOLK, PATENTS AND INDUSTRIAL PROGRESS 23, 175-76 (1942). Interestingly, the same dichotomous valuation of patents appears to have prevailed in the steel industry, where evidence collected in the 1950s indicated that large steel companies were not especially dependent on patents while companies that supplied equipment to the steel industry were reliant on patents. *See* Robert M. Weidenhammer & Irving H. Siegel, *Patent and Other Factors in the Future Organization of the Steel Industry*, 1 PAT., TRADEMARK & COPYRIGHT J. RES. & EDUC. 112, 117 (1957). Again, the demand for IP rights appears to correlate with organizational form: integrated entities exhibit weak demand for, or outright opposition to, IP rights; non-integrated or weakly integrated entities have strong demand for IP rights.

84 Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

85 Innovation Act, H.R. 9, 114th Cong. (2015).

86 *See* Jay P. Kesan & Andres A. Gallo, *The Political Economy of the Patent System*, 87 N.C. L. REV. 1341 (2009). On resistance to patent reform by pharmaceutical and biotechnology companies and support by large internet and other technology companies, see Barney Jopson, *Industry Challenges Tech*

the pharmaceutical industry operates at a high level of vertical integration (and is therefore an exception to the proposed relationship between organizational form and IP policy preferences), its support for strong patents can be explained by the exceptionally large difference between the R&D, testing, and marketing costs borne by a first-mover innovator and the far smaller costs borne by any second-mover entrant. Even though pharmaceutical firms have extensive and difficult-to-replicate production, testing, and marketing assets, the exceptional gap between first-movers' invention and related commercialization costs (estimated at over $540 million in out-of-pocket costs and over $1 billion in capitalized costs for a single drug prior to FDA approval),[88] on the one hand, and second-movers' imitation costs, on the other hand, almost certainly necessitates the use of IP rights to delay entry and secure a sufficient return.

2. Amicus Briefs in Patent Litigation (1982-2015)

Some of the most systematic evidence concerning the relationship between organizational form and IP policy preferences derives from studies of amicus briefs filed in patent litigation. In a striking finding based on amicus briefs filed before the Supreme Court and the Federal Circuit during 1989-2009, Professor Colleen Chien found that amicus briefs filed by public companies—which we would expect to operate under moderate to high levels of vertical integration—favored patentees only 32% of the time.[89] Based on amicus briefs filed before the Supreme Court during 1982-2009, James Conley and David Orozco found that large firms tend to prefer weaker patent rights while the converse is true of smaller firms.[90] In related research, Jay Kesan and Andres Gallo examined the expressed IP policy preferences of various constituencies based on each constituency's estimat-

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Groups over Patents, FINANCIAL TIMES (Apr. 3, 2014 12:00 AM), http://www.ft.com/cms/s/0/6dbda76c-bab7-11e3-8b15-00144feabdc0.html.

87 *See, e.g.,* LETTER FROM KLEINER PERKINS CAUFIELD & BYERS ET AL. TO PATRICK J. LEAHY, CHAIRMAN, COMM. ON THE JUDICIARY, AND ARLEN SPECTER, RANKING MEMBER, COMM. ON THE JUDICIARY (Nov. 6, 2007), http://www.patenthawk.com/blog_docs/071106_VC_letter_to_Senators.DOC; Scott Sandell, Commentary, *A Venture Capitalist's Second Thoughts on Patent Reform*, WALL ST. J., May 31, 2015.

88 The latter figure takes into account the costs incurred on projects that do not result in a commercially viable product. *See* Joseph A. DiMasi et al., *The Price of Innovation: New Estimates of Drug Development Costs*, 22 J. HEALTH ECON. 151, 181 (2003).

89 *See* Colleen V. Chien, *Patent Amicus Briefs: What the Courts' Friends Can Teach Us About the Patent System*, 1 U.C. IRVINE L. REV. 397, 421 (2011).

90 *See* David Orozco & James G. Conley, *Friends of the Court: Using Amicus Briefs to Identify Corporate Advocacy Positions in Supreme Court Patent Litigation*, 2011 U. ILL. J.L. TECH. & POL'Y 107, 125-26 (2011).

ed lobbying expenditures on patent and copyright issues.[91] Looking at firms' lobbying behavior specifically with respect to the Patent Reform Bill of 2007, they find that large information technology firms tended to support reforms that weaken patents while large biopharmaceutical firms, small firms in the information technology and biopharmaceutical industries, individual inventors and universities tended to resist those reforms.[92] While this group may appear to be heterogeneous, all these firm types (other than pharmaceutical firms) share in common a single attribute: they are weakly integrated or stand-alone R&D entities with no or limited commercialization capacities.

To update and supplement these scholars' findings, I collected all amicus briefs filed in Supreme Court cases relating to patent law and in which the decision was issued during January 2008-January 2015. For each brief, I recorded its expressed policy preference based on whether the brief stated that it favored the patentee (or patent applicant), the alleged infringer, or neither party. Based on the description of each brief filer as reflected in its annual report or other publicly available disclosures, I assigned each brief filer (966 in total) to various categories designed to assess preferences based on firm size, entity type, and industry type. In general, the results track previous findings and provide additional detail on filer characteristics and IP policy preferences. As was the case in existing scholarship, the findings are consistent with expectations that large vertically integrated corporations (outside biopharmaceuticals) favor outcomes that weaken patent rights, whereas weakly integrated corporations, such as smaller firms and licensing entities, tend to favor the opposite outcome. The principal results are shown in the Table below.[93] Out of all amicus briefs filed during this period, I found that (i) public corporations favored the alleged infringer 61% of the time, the patentee 19% of the time, and neither party in the remaining cases; and (ii) private corporations (which are presumably typically smaller) favored the infringer only 42% of the time, the patentee 41% of the time, and neither party in the remaining cases. If we compare Fortune 500 and non-Fortune 500 companies,[94] the same tendency is apparent.

91 The expenditures are estimated based on a methodology that uses data on constituencies' reported total lobbying expenditures and then infers the percentage expended on patent-related issues based on each constituencies' intensity of interest in those issues, as indirectly indicated by the number of patent filings and patent-related reports submitted to congressional committees.

92 This is a general description of their results; with respect to specific proposed reforms to the patent statute, the authors sometimes find somewhat more mixed preferences in the case of certain constituencies. For further discussion, see Kesan & Gallo, *supra* note 86.

93 This is a summary description of the results for purposes of this essay-style contribution. In ongoing work, I intend to present these results in more detailed form with more extended analysis.

94 "Fortune 500" company refers to any company that appears in the annual list of "Fortune 500" companies, published by Fortune magazine. The list reflects the largest public and private companies that are incorporated and operate in the U.S. based on total revenues for the most recent fiscal year as

While both populations tend to favor the infringer, the larger Fortune 500 entities do so more consistently (exceeded in IP-skeptical sentiment only by university professors).[95] Most dramatically, I found that academic research entities favored the infringer only 16% of the time, the patentee 75% of the time, and neither party in the remaining cases. This strong preference for the patentee is only exceeded by IP licensing entities, which do so almost all of the time.

Table I: Amicus Briefs in Supreme Court Patent Litigation (January 2008-January 2015)[96]

Entity Type	Favor Patentee	Favor Alleged Infringer	Favor Neither Party
Public corporation	19%	63%	18%
Private corporation	41%	42%	17%
Fortune 500 corporation	14%	69%	17%
Non-Fortune 500 corporation	34%	48%	18%
Universities and other research entities	75%	16%	9%
IP licensing entities	87%	0%	13%
Individual academics (principally law)	18%	74%	8%

These systematic differences in policy preferences across organizational types, as supported by expressed political-economic preferences over more than three decades, are consistent with the proposed correlation between organizational form and IP policy preferences. From an economic

disclosed on publicly filed financial statements. For further description of methodology, see www.fortune.com/fortune500/.

95 In other data collected as part of this project, I distinguish among corporations by industry type, finding that pharmaceutical and biotechnology companies show a strong preference in favor of the patentee, as compared to all other industry types. Hence, the moderately strong preference in favor of the patentee shown above would be even more pronounced if pharmaceutical and biotechnology firms were removed.

96 Note that "universities" does not include briefs filed by professors, individually or as a group. Percentages may not sometimes add up to exactly 100% due to rounding.

perspective, a university is structurally equivalent to a stand-alone R&D entity that can only feasibly monetize its innovation by entering into contractual relationships with third-party commercialization partners. Without IP rights, those transactions are fraught with expropriation risk as discussed above. Hence, I anticipated, and found, that universities are among the most vigorous supporters of robust patent rights, exceeded only by IP licensing entities. Conversely, a large integrated firm is amply protected by non-IP substitutes and therefore has both reduced demand for IP rights and a strategic incentive to weaken IP rights and thereby raise implicit entry barriers for entities that do not have cost-comparable access to non-IP substitutes. Again, as anticipated, I found that larger firms (outside the biopharmaceutical market) are among the most vigorous opponents of robust patent rights.

3. Case Studies

Two historical episodes involving the expansion of IP rights, and the resistance expressed at the time by large integrated incumbents, further support the proposed correlation between demand for IP rights and organizational form. To be clear, this is not to say that patent protection *should* be made available in these markets. The evidence below is simply presented for purposes of showing which constituencies support or resist these expansions of patent protection, which in turn sheds light on which constituencies are or are not benefited by those expansions.

a. Software Patents

In 1966, a Presidential Commission studied, and recommended against, extending patent protection to software.[97] IBM and other computer technology firms supported the Commission's position.[98] In 1968, the Court of Customs and Patent Appeals reversed the PTO's rejection of a patent application for a software application[99] and rejected any categorical ban on patenting software.[100] However, the PTO continued to resist patent applications for software-related innovations on various statutory

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97 TO PROMOTE THE PROGRESS OF USEFUL ARTS: REPORT OF THE PRESIDENT'S COMMITTEE ON THE PATENT SYSTEM, S. Doc. No. 5, at 20-21 (1967).

98 *See* Peter S. Menell, *Envisioning Copyright Law's Digital Future*, 46 N.Y.L. SCH. L. REV. 63, 75 (2003).

99 See Application of Prater and Wei, 415 F.2d 1378 (C.C.P.A. 1968); *see also* U.S. Patent No. 3,380,029 (issued Apr. 23, 1968) for the patent.

100 In re Prater and Wei, 162 U.S.P.Q. 541, 549 n.29 (CCPA 1969).

grounds.[101] In the 1970s, the Supreme Court tackled the patentability of software in three cases: *Gottschalk v. Benson* (1972),[102] *Dann v. Johnston* (1976),[103] and *Parker v. Flook* (1978).[104] As observed through amicus briefs filed in these litigations,[105] integrated computer equipment manufacturers generally opposed the extension of patent protection to software programs. By contrast, specialized software providers, and trade associations representing specialized software providers, generally supported this extension. In *Gottschalk v. Benson*, integrated computer manufacturers (or associations representing computer manufacturers) submitted briefs against the extension of patent protection,[106] while an assortment of independent software providers and data processing firms submitted briefs in favor.[107] While there were fewer amicus briefs submitted in *Dann v. Johnston* and *Parker v. Flook*, hardware manufacturers in those cases similarly opposed judicial rulings that would extend patent protection to software while a similar assortment of independent software providers and data processing firms supported such extension.[108]

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101 See Howard R. Popper, *Prater II,* 19 AMER. UNIV. L. REV. 25 (1970) for a contemporary account.

102 Gottschalk v. Benson, 409 U.S. 63 (1972).

103 Dann v. Johnston, 425 U.S. 219 (1976).

104 Parker v. Flook, 437 U.S. 584 (1978).

105 All briefs were sourced through the Westlaw database. I ignored bar associations, which supported patentees without exception.

106 Brief for Burroughs Corporation as Amicus Curiae Supporting Petitioner, *Gottschalk*, 409 U.S. 63 (No. 71-485), 1972 WL 136232; Brief Amicus Curiae on Behalf of the Business Equipment Manufacturers Association, *Gottschalk*, 409 U.S. 62 (No. 71-485), 1972 WL 136229; Brief Amicus Curiae for Honeywell Inc., *Gottschalk*, 409 U.S. 62 (No. 71-485), 1972 WL 136234; Brief for Amicus Curiae International Business Machines Corporation, *Gottschalk*, 409 U.S. 62 (No. 71-485), 1972 WL 136233. At the time, these firms were primarily hardware manufacturers.

107 Briefs from independent software vendors included Brief for Applied Data Research, Inc. (ADR) as Amicus Curiae Supporting Respondents, *Gottschalk*, 409 U.S. 63 (No. 71-485), 1972 WL 136227; Motion for Leave to File Brief Amici Curiae and Brief for Computer Software Analysts, Inc. and Computer Lists Corp. as Amicus Curiae, *Gottschalk*, 409 U.S. 63 (No. 71-485), 1972 WL 136561; Motion for Leave to File Brief Amicus Curiae and Brief for the Information Industry Association as Amicus Curiae Supporting Petitioner, *Gottschalk*, 409 U.S. 63 (No. 71-485), 1972 WL 136235; Brief for Whitlow Computer Systems, Inc. as Amicus Curiae, *Gottschalk*, 409 U.S. 63 (No. 71-485), 1972 WL 136230. Other pro-patentee briefs included Brief for the Association of Data Processing Service Organizations, Software Products and Service Section (Adapso/Aisc) as Amicus Curiae Supporting Respondents, *Gottschalk*, 409 U.S. 63 (No. 71-485), 1972 WL 137530; Brief for Institutional Networks Corporation as Amicus Curiae, *Gottschalk*, 409 U.S. 63 (No. 71-485), 1972 WL 136231; Brief for Mobil Oil Corporation as Amicus Curiae, *Gottschalk*, 409 U.S. 63 (No. 71-485), 1971 WL 134300. The appearance of Mobil Oil Corp., an integrated manufacturer, among the group of pro-patentee filers may seem anomalous; however, it is probably explained by the fact that Mobil Oil was issued the first patent for a software program, as discussed above.

108 "Pro-patentee" amicus briefs filed in the *Dann* case included: Brief for Applied Data Research, Inc. (ADR) as Amicus Curiae Supporting Respondent, *Dann*, 425 U.S. 219 (No. 74-1033), 1975 WL 173471; Brief for the Association of Data Processing Service Organizations, Software Industry Association (ADAPSO SIA) as Amicus Curiae Supporting Respondent, *Dann*, 425 U.S. 219 (No. 74-1033),

Differences in firms' expressed preferences for or against software patents in the 1960s and 1970s, as illustrated by the views expressed in the amicus briefs filed in the aforementioned litigations, can be logically derived from any particular firm's level of integration. Until antitrust action by federal prosecutors against IBM during the late 1960s, leading computer manufacturers typically bundled software as an unpriced component of a larger hardware product and therefore had no need for patent protection (and, strategically, had reasons to oppose it in order to frustrate entry by stand-alone software providers). IBM took the view that software programs were not patentable and declined to assert copyright in its software programs.[109] IBM's bundling strategy—and accompanying lobbying strategy—enabled it to earn a return on software development in the absence of IP rights, but had an adverse effect on the ability of independent software providers to do so. As the recipient of what is considered to be the first software patent explains: "Back in the 1960s . . . computer companies were giving away their software when they sold the computer . . . [S]elling against free software is difficult. That's the reason I tried to get a patent."[110] Without patent protection (and, at the time, uncertain copyright protection),[111] software providers principally supplied customized software programs to corporate customers on a contract basis[112] or, as a contemporary

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1975 WL 173472; Brief for Software Associates, Inc. as Amicus Curiae, *Dann*, 425 U.S. 219 (No. 74-1033), 1975 WL 173470; Brief for Universal Software, Inc. as Amicus Curiae, *Dann*, 425 U.S. 219 (No. 74-1033), 1975 WL 173467. "Pro-patentee" amicus briefs filed in the *Parker* case included: Brief for Applied Data Research, Inc. (ADR) as Amicus Curiae Supporting Respondent, *Parker*, 437 U.S. 584 (No. 77-642), 1977 WL 189333; Brief for the Association of Data Processing Service Organizations (ADAPSO) as Amicus Curiae Supporting Respondent, *Parker*, 437 U.S. 584 (No. 77-642), 1978 WL 206643; Brief for Mobil Oil Corporation as Amicus Curiae, *Parker*, 437 U.S. 584 (No. 77-642), 1978 WL 206640; Brief for Software Associates, Inc. as Amicus Curiae, *Parker*, 437 U.S. 584 (No. 77-642), 1978 WL 206641. "Anti-patentee" amicus briefs filed in the *Dann* and *Parker* cases included, respectively: Brief for the Computer & Business Equipment Manufacturers Association (CBEMA) as Amicus Curiae Supporting Petitioner, *Dann*, 425 U.S. 219 (No. 74-1033), 1975 WL 173466; Brief for the Computer & Business Equipment Manufacturers Association (CBEMA) as Amicus Curiae, *Parker*, 437 U.S. 584 (No. 77-642), 1978 WL 206639.

109 *See* Martin Campbell-Kelly, *Not All Bad: An Historical Perspective on Software Patents*, 11 MICH. TELECOMM. & TECH. L. REV. 191, 210 (2005).

110 *See* Charles Arthur, *Software Patents 'a Bit of a Mess' Says Martin Goetz, the First Man to Get One*, THE GUARDIAN, (Jan. 24, 2013, 13:22), http://www.theguardian.com/technology/2013/jan/24/smartphone-patent-wars-intellectual-property.

111 During the 1960s and 1970s, it had not yet been resolved whether software could be protected under copyright, given misgivings about whether doing so would run afoul of copyright's exclusion of "ideas" from eligible subject matter, as distinguished from expression. These doubts were largely resolved by the Copyright Act of 1976, which specifically designated software as copyrightable subject matter. *See generally* Copyright Act of 1976, Pub. L. No. 94–553, 90 Stat. 2541. Additionally, in Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1247–49 (3d Cir. 1983), an influential court resolved doubts concerning whether copyright could protect operating system code.

112 *See* FINAL REPORT OF THE NATIONAL COMMISSION ON NEW TECHNOLOGY USES OF COPYRIGHTED WORKS, 79-80 (1978).

observer noted, tended to merge with larger firms that could supply internal financing and distribution capacities.[113] With the advent of patent protection (and, by the late 1970s, copyright protection), software providers had greater ability to invest resources in assembling prepackaged software that could be distributed to a mass market without undue fear of unauthorized replication.[114] IBM and its peers were successful in deferring the extension of patent protection to software until a 1981 Supreme Court decision that ruled otherwise.[115]

b. Financial Method Patents

In 1998, the Federal Circuit issued a decision upholding the patentability of business methods, overturning a widespread understanding that business methods were not eligible for patent protection.[116] The conventional proposition concerning the political economy of IP rights would expect that the financial services industry would be eager to earn additional rents through a state-granted monopoly right. Just the opposite is true: the financial services industry vigorously opposed the extension of IP rights to financial innovations. The reason can be derived from the fact that financial services firms earn returns on innovation through a combination of non-IP capacities, including lead-time advantage, branding, and a suite of difficult-to-replicate advisory, marketing, and execution capacities.[117] The incumbents' comparative advantages in non-IP assets provided a strategic reason to oppose the introduction of IP rights, which creates both an entry opportunity for younger, smaller, and less integrated firms and a litigation opportunity for patent holders that lack any operational capacities. Consistent with that rationale, the financial services industry successfully lobbied against business method patents, rapidly securing legislative amendments that instituted a prior user defense in patent infringement litigation involv-

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113 *See* Peter Hall et al., *The American Computer Software Industry: Economic Development Prospects,* in SILICON LANDSCAPES 53 (1985).

114 I am not suggesting that these changes in industrial structure were principally the result of changes in IP protection; rather, those changes facilitated a change in industrial structure that arose due to other causes. The key cause was most likely the improved efficiency of computing technology, and the resulting expansion of the personal and small-business computer market, which generated sufficient demand to elicit investment by software providers in developing programs that could be sold on a mass scale, rather than through one-off customer-specific transactions. *See* Campbell-Kelly, *supra* note 109, at 211.

115 *See* Diamond v. Diehr, 450 U.S. 175, 185–86 (1981).

116 *See* State St. Bank & Trust Co. v. Signature Fin. Grp., Inc., 149 F.3d 1368, 1375-77 (Fed. Cir. 1998).

117 *See* Peter Tufano, *Financial Innovation*, *in* 1A HANDBOOK OF THE ECONOMICS OF FINANCE 307, 324-27 (George M. Constantinides et al. eds., 2003); Peter Tufano, *Financial Innovation and First-Mover Advantages*, 25 J. FIN. ECON. 213, 234-35 (1989).

ing business method patents (enacted by Congress in 1999)[118] and a "second look" review for applications for these types of patents (adopted by the PTO in 2000).[119] In 2008, the Federal Circuit issued a decision that limited the patentability of business method patents,[120] and, in 2014, the Supreme Court issued its landmark decision in *Alice Corp. v. CLS Bank International*,[121] which has cast significant doubt on the patentability of business method patents in general. Consistent with its past policy preferences, the financial services industry filed amicus briefs in both litigations supporting the alleged infringer and arguing against the patentability of business methods.[122]

4. Is Copyright Different?

It might be thought that the content industries, like the pharmaceutical industry, are an exception to the tendency of large integrated firms to prefer weaker IP rights. Clearly the dominant content holders in creative and media markets usually lobby for stronger copyright protections and tend to defend those protections zealously in court.[123] Closer consideration of the content industries allows for a more precise and general formulation of the relationship between the demand for IP rights and organizational form, which can account for observed tendencies in firm-specific preferences for stronger or weaker IP rights in both technology and content markets. In both markets, differences in revenue-generation models tend to be associated with differences in IP policy preferences. Firms tend to favor stronger

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118 American Inventors Protection Act of 1999, Pub. L. 106-113, 113 Stat. 1501 (1999).

119 U.S. PATENT & TRADEMARK OFFICE, A USPTO WHITE PAPER: AUTOMATED FINANCIAL OR MANAGEMENT DATA PROCESSING METHODS (BUSINESS METHODS) (2000).

120 *In re* Bilski v. Kappos, 545 F.3d 943, 1015 (Fed. Cir. 2008), *aff'd*, 561 U.S. 593 (2010).

121 *See* Alice Corp. v. CLS Bank Int'l, 134 S. Ct. 2347, 2349-50 (2014).

122 *See* Brief for Bank of America Corp. & Barclays Capital Inc., et al. as Amici Curiae Supporting Respondents, Bilski v. Kappos, 561 U.S. 593 (2010) (No. 08-964), 2009 WL 3199628; Brief of the Clearing House Ass'n & Fin. Servs. Roundtable as Amici Curiae Supporting Respondents, Alice Corp. v. CLS Bank Int'l, 134 S. Ct. 2347 (2014) (No. 13-298), 2014 WL 880953. According to the brief filed in the *Alice* case, the Financial Services Roundtable represents 100 financial services companies and the Clearing House Association is the oldest banking association in the United States and "clears more than $2 trillion per day across its networks". *See id.*, at v.

123 I intentionally say "usually," rather than "always." When large media firms are net users of content assets, they adopt an IP-hostile position. For example, in the recent Supreme Court decision, *Petrella v. Metro-Goldwyn-Mayer*, 134 S. Ct. 1962 (2014), the film studio advanced a position (arguing for a strict interpretation of the statute of limitations under the Copyright Act) that would make it more difficult for copyright holders to pursue infringement claims. Similarly, in *Aalmuhammed v. Lee*, 202 F.3d 1227 (9th Cir. 2000), a film studio successfully argued for a standard that makes it harder for individuals to assert copyright infringement claims with respect to material purportedly contributed to a larger creative production. In both cases, the large media firm is subject to the hold-up risk that motivates large technology firms to oppose strong applications of IP rights with greater consistency.

IP when they derive revenues principally from the stand-alone or "unbundled" sale of intellectual assets, which will tend to characterize unintegrated or weakly-integrated entities. By contrast, firms favor weaker IP when they derive revenues principally from a complementary or "bundled" suite of goods or services, which will tend to characterize substantially integrated entities.

a. Unbundled Revenue Models Favor Stronger IP

Despite differences in size, a large media entity such as a Hollywood studio is structurally analogous in certain respects to an upstream R&D supplier in a technology market. Both entities use unbundled (or substantially unbundled)[124] models for capturing returns from intellectual assets—content assets delivered to end-users in the former case and technology assets delivered to intermediate users in the latter case. Neither a film studio nor a chip design firm can expect to remain viable in its current stand-alone organizational form if it were to give away the intellectual assets it sourced, produced, and marketed at significant cost and risk. Hence, a content production firm such as a movie studio, record label, or television network consistently advocates for (and generally seeks to enforce) the highest levels of copyright protection, which maximizes the menu of financing and distribution models from which it can select in extracting revenue from its creative portfolio.[125] This is not to say that these entities would necessarily exit or reduce investment in these markets without IP protections; however, they would be compelled to adopt a bundled structure that generates revenue through a complementary set of goods and services. This can be observed in the recorded music market, which, in response to dramatic declines in sales revenues as a result (in part) of unauthorized consumption, adopted "360" deal structures in which the record label receives a percentage of the artist's revenues earned from live performance, a complementary

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124 I say "substantially unbundled" because a content firm such as a film studio is today typically a subsidiary of a larger parent firm that has extensive commercialization capacities. Nonetheless, the studio's business model still relies on extracting revenue directly from content assets that are distributed directly and on a "stand-alone" basis to target consumers.

125 Note that this does *not* mean that the copyright holder will always impose the most onerous access restrictions and pricing levels with respect to its copyright-protected assets. Rather, maximal copyright protection provides the copyright holder with maximal freedom to select the profit-maximizing combination of pricing and access regulations. In some cases, as discussed above, that might even recommend fully or partially giving away the asset and earning revenue on a complementary good.

(and inherently excludable) good that the record label had previously forfeited to the artist.[126]

b. Bundled Revenue Models Favor Weaker IP

An online distribution or search intermediary, such as Google, generates revenues indirectly through complementary products and services. Specifically, Google indirectly extracts revenue from its zero-priced search services through an associated suite of complementary assets that are difficult for others to replicate (primarily, data-collection and targeted advertising services associated with Google search engines, which employ algorithms and other technical features that may be difficult to reverse-engineer). This two-sided structure enables Google to earn revenues from advertising clients on the "pay" side while users enjoy access to a rich pool of informational assets (search results, traffic information, YouTube videos) on the "free" side.[127] This is not a new model in the content market: broadcast television and terrestrial radio stations have always operated by giving away content to viewers and listeners, respectively, while earning revenues by selling advertising services to businesses.[128] Not coincidentally, both Google's and the television and radio stations' business model is structurally analogous to IBM's strategy in the server market, in which it extracts revenue from the sale of proprietary hardware and associated services, while the associated informational asset (the Linux operating system) is provided at no cost to users.[129]

As a bundled content intermediary, Google benefits from reductions in the strength of copyright for two reasons.

First, reducing copyright strength reduces Google's exposure to direct and indirect copyright infringement claims from content suppliers and hence, reduces the price it must implicitly pay for enabling users to make unauthorized use of that content or, in some cases, engaging in the practice itself. This is literally the case whenever Google prevails in copyright infringement litigation brought by media companies, as was the case in the 2013 litigation victory by YouTube (a Google subsidiary) over Viacom and

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126 *See* Sara Karubian, *360° Deals: An Industry Reaction to the Devaluation of Recorded Music*, 18 S. CAL. INTERDISC. L.J. 395 (2009). On performance-based revenue models in the music industry, see Barnett, *Copyright Without Creators, supra* note 16, at 45-48.

127 To be precise, users' access is not entirely "free" since users typically forfeit, whether explicitly or implicitly, access to some of their personal data, a commercially valuable asset.

128 It should be noted that Google's (and other digital search services') giveaway model is more extreme in two respects: (i) it disseminates content over which the distribution intermediary has often not secured a license from the content holder; and (ii) users are able to replicate and re-transmit that content at low cost and high quality.

129 *See supra* notes 69-71.

other content holders,[130] thereby avoiding both copyright infringement damages and licensing fees going forward. From an economic perspective, those legal decisions reduce the input costs borne by Google, and since Google is an overwhelming net user of content, they increase its total net profits from the sale of advertising services. That business rationale explains why Google, and other advertising-based search services, vigorously promoted public opposition to the proposed Stop Online Piracy Act ("SOPA"), which would have elevated the penalties to which websites could be subject for engaging in or facilitating online infringement of copyright-protected material.[131]

Second, reducing copyright strength reduces users' copyright infringement liability and hence, the implicit price that users must pay to access and distribute content through Google's services. That in turn makes the search engine more attractive, increases the number of users, and ultimately increases the rates that Google can charge for its core complementary asset—namely, advertising services. Consistent with this proposition, Google has not only expended significant efforts in lobbying against expanded copyright protections, but has undertaken unilateral self-help actions that effectively weaken copyright protection on a mass scale. For example, the Google Books project digitized millions of books held by university libraries and, even when the owner of the copyright of an out-of-print (but still in-copyright) book could not be located, made excerpts (or "snippets") of those books available online without securing the owner's consent. Absent a fair use defense, the first step (digitization) was clearly a violation of copyright and the second step (snippet display) was almost certainly a violation.[132] Litigation over those questions, in cases such as *Authors Guild, Inc. v. Google Inc.* and *Authors Guild, Inc. v. HathiTrust*,[133] has provided an opportunity for Google to successfully expand the fair use defense to a significant range of content digitization and search activities, thereby escaping liability in those cases and securing a precedent that pro-

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130 *See* Viacom Int'l Inc. v. YouTube, Inc., 940 F. Supp. 2d 110 (S.D.N.Y. 2013).

131 *See* Declan McCullagh & Greg Sandoval, *Google Will Protest SOPA Using Popular Home Page*, CNET (Jan. 17, 2012, 8:57 AM), http://www.cnet.com/news/google-will-protest-sopa-using-popular-home-page/.

132 I say "almost certainly" because, in limited circumstances, some courts have recognized a *de minimis* defense to copyright infringement. *Compare* Newton v. Diamond, 388 F.3d 1189 (9th Cir. 2003) (recognizing *de minimis* defense with respect to infringement of the performance right in a musical composition) *with* Bridgeport Music, Inc. v. Dimension Films, 410 F.3d 792 (6th Cir. 2005) (rejecting *de minimis* defense with respect to infringement of the reproduction right in a sound recording).

133 Authors Guild Inc. v. Google Inc. (2d Cir. 2015); Authors Guild, Inc. v. HathiTrust, 755 F.3d 87 (2d Cir. 2014). Note that only the former litigation involved snippet display practices.

vides Google (and other digital search services) with the freedom to engage in future content giveaway strategies.[134]

CONCLUSION

Current trends in IP scholarship and the broader intellectual climate as expressed by courts, policymakers, and the popular press, tend to express skepticism toward the necessity of IP rights or at least, robust versions of those rights. That view is grounded in a medley of three underlying propositions: (i) IP rights increase costs to users and raise entry barriers; (ii) innovation often proceeds without IP; and (iii) IP rights tend to protect incumbents. Closer examination shows that these propositions generate false predictions over a significant range of circumstances. The effects of changes in the strength of IP rights cannot be assessed without taking into account both (i) the potent non-IP mechanisms that firms may deploy to capture value from innovation investments and (ii) entity-specific differences in the costs of accessing those alternative mechanisms. To be clear, taking into account these mechanisms (and differential access to those mechanisms) does not recommend robust versions of IP rights across the board. Some or even all recent and proposed reductions in the strength of the patent regime (and expansions of the fair use defense under copyright law) may meet at least a reasonableness threshold under this alternative analytical framework. At a minimum, however, this dynamic approach toward analyzing changes in IP rights urges caution in any significant movement away from robust IP protection. In an important set of circumstances, reducing IP rights can increase costs for users while raising entry barriers for firms that adopt weakly integrated and other unbundled business models for implementing the innovation and commercialization process. The result is perverse: weaker IP rights may raise entry costs, increase concentration, and ultimately raise prices, limit output, or otherwise distort innovation investments. This concern finds support in reasonably systematic differences in both organizational behavior under stronger and weaker IP regimes and IP policy preferences across more and less integrated entities in innovation markets. This nuanced if more complex analytical framework provides a sounder basis for informed discussions over the future direction of IP rights in innovation markets.

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134 This is not intended to mean that the court's expansions of the fair use defense in these decisions were incorrect; rather, I am simply observing why reduced copyright operates to Google's business advantage, which may or may not coincide with the public interest.

Appendix: Supreme Court Decisions Relating to Patent Law (January 2008 - January 2015)

CASE	OUTCOME (P,D,N)[135]	VOTE
Quanta Computer, Inc. v. LG Electronics, Inc., 553 U.S. 617 (2008)	D	9-0
Bilski v. Kappos, 561 U.S. 593 (2010)	D	9-0
Global-Tech Appliances, Inc. v. SEB S.S., 131 S. Ct. 2060 (2011)	D	8-1
Board of Trustees of Stanford Univ. v. Roche Molecular Systems, 131 S. Ct. 2188 (2011)	N	7-2
Microsoft Corp., v. i4i Ltd. P'ship, 131 S. Ct. 2238 (2011)	D	9-0
Mayo Collaborative Servs. v. Prometheus Labs, Inc., 132 S. Ct. 1289 (2012)	D	9-0
Caraco Pharm. Labs., Ltd. v. Novo Nordisk A/S, 132 S. Ct. 1670 (2012)	D	9-0
Kappos v. Hyatt, 132 S. Ct. 1690 (2012)	P	9-0
Gunn v. Minton, 133 S. Ct. 1059 (2013)	N	9-0
Bowman v. Monsanto Co., 133 S. Ct. 1761 (2013)	P	9-0

135 "P" means the decision results in an interpretation of the law that tends to favor plaintiffs in patent infringement suits (even if the plaintiff may not have prevailed in that particular suit). "D" means the decision results in an interpretation of the law that tends to favor defendants in patent infringement suits (even if the defendant may not have prevailed in that particular suit). "N" means the decision resulted in an interpretation of the law that does not clearly favor plaintiffs or defendants in patent infringement litigation.

CASE	OUTCOME (P,D,N)[136]	VOTE
Ass'n for Molecular Pathology v. Myriad Genetics, Inc., 133 S. Ct. 2107 (2013)	D	9-0
FTC v. Actavis, Inc., 133 S. Ct. 2223 (2013)	D	5-3
Medtronic, Inc. v. Mirowski Family Ventures, LLC, 134 S.Ct. 843 (2014)	D	9-0
Highmark Inc. v. Allcare Health Mgmt. Sys., 134 S. Ct. 1744 (2014)	D	9-0
Limelight Networks, Inc. v. Akamai Techns., Inc., 134 S. Ct. 2111 (2014)	D	9-0
Nautilus, Inc. v. Biosig Instruments, Inc., 134 S. Ct. 2120 (2014)	D	9-0
Alice Corp. Pty. Ltd. v. CLS Bank Int'l, 134 S. Ct. 2347 (2014)	D	9-0
Teva Pharm. USA, Inc. v. Sandoz, Inc., 135 S. Ct. 831 (2015)	N	7-2

136 "P" means the decision results in an interpretation of the law that tends to favor plaintiffs in patent infringement suits (even if the plaintiff may not have prevailed in that particular suit). "D" means the decision results in an interpretation of the law that tends to favor defendants in patent infringement suits (even if the defendant may not have prevailed in that particular suit). "N" means the decision resulted in an interpretation of the law that does not clearly favor plaintiffs or defendants in patent infringement litigation.

THE LIABILITY ENGINE THAT COULD NOT: WHY THE DECADES-LONG LITIGATION PURSUIT OF NATURAL RESOURCE SUPPLIERS SHOULD GRIND TO A HALT

Phil Goldberg,[*] Christopher E. Appel,[**] & Victor E. Schwartz[***]

A country's natural resources are a vital public asset. How these resources are extracted and used are valuable social and economic drivers.[1] Consider fossil fuels and their ability over the past century to generate affordable domestic sources of electricity. These resources have dramatically elevated the standard of living in the United States.[2] Extracting and using natural resources for purposes such as energy production, though, also comes with risks.[3] While natural resources are limited in supply and have great value, they can cause environmental, property, and personal harms even when properly used.[4] Establishing national policies for the extraction, supply, and use of natural resources takes delicate, deliberative balancing of benefits and risks.

For much of American history, this balancing has been placed in the hands of Congress, state legislatures, and regulators pursuant to legislative

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1 *See infra* Part I.

2 *See* GEORGE CONSTABLE & BOB SOMERVILLE, A CENTURY OF INNOVATION: TWENTY ENGINEERING ACHIEVEMENTS THAT TRANSFORMED OUR LIVES 2-5 (Joseph Henry Press 2003) (calling societal electrification the "greatest engineering achievement" of the past century).

3 *See* Peter S. Glaser et al., *Managing Coal: How to Achieve Reasonable Risk with an Essential Resource*, 13 VT. J. ENVTL. L. 177, 187-201 (2011) (discussing natural resource risks in energy production).

4 *See id.*

authority.[5] This makes sense. These bodies have the capacity to carefully weigh competing considerations and determine the path they believe is in the best interests of the American public. Nevertheless, the exclusivity of this governance has been under attack for decades by those who believe that private litigation is a necessary path for regulation. Since the 1970s, litigation has grown as a tactic for regulating the supply and use of natural resources. These lawsuits would have courts make energy policy while looking solely at the plaintiffs' environmental allegations. Some of these suits are nakedly political with the plaintiffs fully acknowledging that their goals are to regulate or reduce the use of natural resources, such as the consumption of fossil fuels.[6] Other suits are brought by profit-motivated lawyers simply hoping to tap into funds generated by the sale of natural resources.[7]

This article examines the varied attempts to subject to liability those who extract, sell, or use natural resources beyond the legislative and regulatory regimes adopted by policymakers. It explains how this decades-long pursuit of natural resource liability has historically failed. However, rather than come to an end, this litigation has taken a page from *The Little Engine that Could*, following the credo that if you persist at something long enough, you will succeed.[8] Indeed, over the past decade there have been several new waves of litigation offering creative theories to regulate natural resource development and use through expanded liability.[9] This article analyzes these attempts and the public policy reasons why such pursuits should be the engine that "could not."

Part I provides an historical overview of how Congress has carefully managed risks associated with natural resources. Part II explains attempts to subject producers of natural resources to liability under products liability theories. This litigation "engine" was the first to be derailed. Part III discusses efforts to sue both producers and industrial users of natural resources under conduct-based torts, such as public nuisance. While these tracks have not reached the plaintiffs' desired destinations, they also have not yet reached their terminus. Finally, part IV examines litigation engines directed at government regulators to force them to adopt the plaintiffs' desired political agendas. The article concludes that turning the extraction and use of natural resources into liability-causing events are unwise "regulation through litigation."[10]

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5 *See generally* EVOLUTION OF NATURAL RESOURCES LAW AND POLICY, Natural Resources Law Center, University of Colorado Law School (MacDonnell and Bates, eds., 2010).

6 *See infra* notes 129 through 130 and accompanying text; *see also infra* Part IV.B.

7 *See infra* Part II.

8 *See* WATTY PIPER, THE LITTLE ENGINE THAT COULD (1930).

9 *See infra* Parts III and IV.

10 *See* Victor E. Schwartz & Christopher E. Appel, *Government Regulations and Private Litigation: The Law Should Enhance Harmony, Not War*, 23 B.U. PUB. INT. L.J. 185, 189-95 (2014) (discussing various lawyer-driven "regulation through litigation" attempts, including climate change litigation).

Courts should continue rejecting litigation that attempts to regulate America's supply and use of natural resources. Natural resources are important public goods. How they are extracted and used has broad impacts on society, and balancing their benefits and risks are decisions best left in the hands of elected representatives in Congress. Congress, along with the federal regulators they authorize, unlike courts, have the institutional tools to properly balance broad stakeholder interests and set natural resource policy for the entire country.

I. THE EVOLUTION OF NATURAL RESOURCES LAW

Society's modern development, both in the United States and abroad, is inexorably tied to the development and use of a country's natural resources.[11] Natural resources—which include water, soil, forestry, fish, wildlife, minerals, oil, and natural gas, among many other raw materials[12]—provide key ingredients for governments to meet the food, shelter and quality of life needs of its citizenry. The development and use of these resources have spurred economic and societal growth. The production of these resources have generated commerce and led to the building of nations' infrastructure. In particular, the extraction and use of fossil fuels—namely coal, oil, petroleum and natural gas—over the past 200 years have fueled the industrial and information revolutions that have driven world economies.[13] The result has been a global rise in standards of living, healthier human populations, and longer lifespans.[14] Modern society would not have happened without the ability of governments to harness their natural resources.

The United States has developed into one of the world's most advanced societies in large part because it is endowed with vast natural re-

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11 *See* Adam I. Davis, *Ecosystem Services and the Value of Law*, 20 DUKE ENVTL. L. & POL'Y F. 339, 340 (2010) ("the principle that we can own land, build on it, and take resources from it is still a rock on which the world economy stands"); *see also Sustainability*, EPA, (last updated Sep. 21, 2015), http://www2.epa.gov/sustainability/learn-about-sustainability#what ("Everything that we need for our survival and well-being depends, either directly or indirectly, on our natural environment.").

12 *See, e.g.,* MINN. STAT. ANN. § 116B.02, subdiv. 4 (defining natural resources to include "all mineral, animal, botanical, air, water, land, timber, soil, quietude, recreational and historical resources"); HAW. CONST. ART. XI, § 1 (stating objective to "conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals and energy sources").

13 *See Fossil Fuel Energy Consumption*, WORLD BANK, http://data.worldbank.org/indicator/EG.USE.COMM.FO.ZS (reporting fossil fuel consumption as a percentage of total energy consumption for industrialized nations); *see also* Alfred D. Chandler, Jr., *Anthracite Coal and the Beginnings of the Industrial Revolution in the United States*, 46 BUS. HISTORY REV. 141, 142 (1972) (discussing importance of coal production in U.S. Industrial Revolution).

14 *See* Peter S. Glaser et al., *supra* note 3, at 178; *see also* Robert Mann, *Another Day Older and Deeper in Debt: How Tax Incentives Encourage Burning Coal and The Consequences for Global Warming*, 20 PAC. MCGEORGE GLOBAL BUS. & DEV. L.J. 111 (2008) (stating that coal has "kept us warm, fired our factories, fed our trains and lit our world").

sources. The nation has access to water via natural rivers and oceans,[15] approximately 670 million forested acres, and 450 million acres of cropland.[16] The United States additionally contains natural deposits of more than ninety nonfuel minerals that include key commodity reserves of gold, copper, iron ore, and zinc.[17] It also boasts a reserve base of roughly 480 billion short tons of coal, which is enough for the country to provide 35% of the world's coal supply for more than 250 years,[18] an estimated 354 trillion cubic feet (Tcf) natural gas reserve, and strategic reserves of more than thirty-six billion barrels of crude oil.[19] The aggregate value of these natural resource reserves has been estimated at $45 *trillion*.[20]

Given the importance and abundance of the nation's resources, the federal government has long promoted, and profited from, their extraction and use. Starting in the 19th century, Congress enacted laws to encourage westward expansion, greater land use, and exploration.[21] In 1866, Congress enacted the first federal mining laws to facilitate the discovery of minerals and precious metals such as gold, silver, and copper.[22] These laws assured property rights for those who extracted the minerals. The General Mining Law of 1872, which is still in effect today,[23] proclaimed that "all valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, shall be free and open to [such] exploration and purchase."[24] To facilitate this exploration and generate public revenue, the government leased public land for private sector companies to extract the deposits.[25]

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15 *See Water Sense: Tomorrow & Beyond*, EPA (last updated Oct. 16, 2015) http://www.epa.gov/watersense/our_water/tomorrow_beyond.html (explaining that "Earth might seem like it has abundant water, but in fact less than 1 percent is available for human use").

16 *See Major Land Uses*, U.S. DEPT. OF AGRICULTURE, http://ers.usda.gov/data-products/major-land-uses.aspx#25972.

17 *See Mineral Commodity Summaries 2014*, U.S. Geological Survey, U.S. DEPT. OF INTERIOR, http://minerals.usgs.gov/minerals/pubs/mcs/2014/mcs2014.pdf.

18 *See U.S. Coal Reserves*, U.S. ENERGY INFORMATION ADMIN., http://www.eia.gov/coal/reserves/; Coal Facts, Coal News, http://www.coalnews.net/facts.php.

19 *See U.S. Crude Oil and Natural Gas Proved Reserves*, U.S. ENERGY INFORMATION ADMIN. (Nov. 23, 2015), http://www.eia.gov/naturalgas/crudeoilreserves/index.cfm.

20 *See The World's Most Resource-Rich Countries*, 24/7 WALL STREET (Apr. 18, 2012), http://247wallst.com/special-report/2012/04/18/the-worlds-most-resource-rich-countries/.

21 *Supra* note 5.

22 *See* Mining Law of 1866, 14 Stat. 251 (1866); Robert B. Comer, *Introduction to Federal Mining Law*, in AMERICAN LAW OF MINING § 30.01 (2nd ed.); John C. Lacy, *The Historic Origins of the U.S. Mining Laws and Proposals for Change*, 10 NAT. RESOURCES & ENV'T 13 (1995) (providing an early history of mining law).

23 *See* Ch. 152 § 9, 17 Stat. 91 (codified as amended at 30 U.S.C. § 22-54 and §§ 611-615); *see also* George C. Coggins et al., FEDERAL PUBLIC LAND AND RESOURCES LAW 85-86 (5th ed. 2002) (discussing early federal mining laws).

24 30 U.S.C. § 22.

25 The first federal mineral leasing act was passed in 1807, but was "never adequately administered and was ineffectual in its scope and effect." Wells S. Parker, *Mining on Federal Lands*, Rocky Mountain Mineral Law Foundation, Public Land Law, Regulation, and Management, Paper 5 (2014). It

Congress then adopted several federal land leasing laws leading up to the Mineral Leasing Act of 1920, which established a comprehensive leasing system for minerals within federal lands.[26] This structure for natural resource development is still in effect today. The government now has leases for royalty payments tied to the extraction of nearly 70 different types of minerals.[27]

Across this time, Congress has actively managed risks associated with the exploration, extraction, and use of these natural resources.[28] Worker safety, public health, and environmental protection have all been addressed through federal laws.[29] In 1891, Congress enacted the first federal mine safety law, which, among other things, established minimum ventilation requirements at underground coal mines and prohibited operators from employing children under age 12.[30] That same year, Congress passed the Forest Reserve Act to enable the President to set aside "forest reserves" for conserving lands that might have been used for commercial purposes.[31] At the beginning of the 20th Century, President Roosevelt set aside more than 230 million acres of land during his presidency, including inaugurating five national parks and fifty-five wildlife refuges.[32] In 1910, Congress created the Bureau of Mines within the Department of the Interior to identify ways to reduce worker accidents.[33]

In the late 1940s and 1950s, Congress laid the foundation for the modern network of worker safety and environmental laws to assure both the

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was not until the adoption of series of mining acts, beginning in 1866 and culminating with the Mining Law of 1872, that the federal government began to take a more active role in leasing its land. *See id.*; *see also* Coggins et al., *supra* note 23, at 85 (stating that the federal government's interest in the acquisition of minerals and mineral rights extends as far back as the Congress of the Confederation in the 1780s).

26 *See* Ch. 85, 41 Stat. 437 (1920); *see also* Parker, *supra* note 25 (characterizing The Mineral Leasing Act of 1920 as "the most comprehensive federal mineral development legislation").

27 *See Leasing Minerals on Federal and Indian Lands: Briefing for Congressional Requestors*, Government Accountability Office, GAO-13-45R Mineral Resources (June 2012), at 11, http://www.gao.gov/products/GAO-13-45R.

28 *See* Alexandra B. Klass, *Property Rights on the New Frontier: Climate Change, Natural Resource Development, and Renewable Energy*, 38 ECOLOGY L. Q. 63, 77 (2011); *see also* Mark Latham, Victor E. Schwartz & Christopher E. Appel, *The Intersection of Tort and Environmental Law: Where the Twains Should Meet and Depart*, 80 FORDHAM L. REV. 737, 743-46 (2011) (explaining distinct purposes and goals behind seminal federal environmental laws relating to natural resource development).

29 *See id.*

30 *See History of Mine Safety and Health Legislation*, MINE SAFETY AND HEALTH ADMIN., U.S. DEPT. OF LABOR, http://www.msha.gov/MSHAINFO/MSHAINF2.HTM.

31 *See* Act of Mar. 3, 1891, ch. 561, 26 Stat. 1095, 1103 (repealed 1976); *see also Our History*, U.S. FORESTRY SERV., http://www.fs.fed.us/learn/our-history.

32 *See* Robert Brown, *A Conservation Timeline*, THE WILDLIFE PROFESSIONAL (Fall 2010), https://www.wildlifedepartment.com/aboutodwc/A%20Conservation%20Timeline[1].pdf.

33 *See* Bureau of Mines Act, Pub. L. No. 61-179, ch. 240, 36 Stat. 369 (1910); *see also supra* note 30.

sustainability of America's natural resources and a reduction of adverse impacts associated with extracting and using them. These early efforts included the first code of federal regulations for mine safety in 1947,[34] the Federal Water Pollution Control Act of 1948,[35] and the Air Pollution Control Act of 1955.[36] In the 1960s and 1970s, society significantly increased awareness of workplace and environmental risks, and Congress acted accordingly, enacting an array of laws to manage these risks, whether they came from the extraction of natural resources, man-made chemicals, or other sources.

For environmental risks, Congress established the Environmental Protection Agency (EPA) in 1970 and enacted a series of laws aimed at balancing society's interests in commercial development and being responsible stewards of the environment.[37] The cornerstones of this effort were the Clean Water Act (CWA),[38] Clean Air Act (CAA),[39] National Environmental Policy Act (NEPA),[40] and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA).[41] The CWA and CAA create permitting programs, such as the National Pollutant Discharge Elimination System (NPDES), to regulate the release of pollutants.[42] Under NEPA, Environmental Impact Statements are required for any action that can significantly affect the environment.[43] Also, CERCLA provides a remedy for the release of hazardous substances above permitted amounts.[44] While each of these laws has broad applicability, they have directly regulated the extraction and use of natural resources, particularly fossil fuels.

Complementing this system are laws that target risks associated with specific natural resources. For example, the National Forest Management

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34 Act of Aug. 4, 1947, Pub. L. No. 80-328, 61 Stat. 725; The Federal Mine Safety Code, 32 C.F.R. Part 304 (1947), *reprinted in* 11 Fed. Reg. 9017 (1946); *see also supra* note 30.

35 Federal Water Pollution Control Act of 1948, Pub. L. No. 80-845, 62 Stat. 1155 (1948); *see also* History of the Clean Water Act, Law & Regulations, EPA, http://www2.epa.gov/laws-regulations/history-clean-water-act ("The Federal Water Pollution Control Act of 1948 was the first major U.S. law to address water pollution.").

36 Air Pollution Control Act of 1955, Pub. Law No. 84–159, 69 Stat. 322 (1955).

37 *See* Latham et al., *supra* note 28, at 743-46; Michael C. Blumm & David H. Becker, *From Martz to the Twenty-First Century: A Half-Century of Natural Resources Law Casebooks and Pedagogy*, 78 U. COLO. L. REV. 647, 651 (2007) (discussing "regulatory explosion of the late 1960s and 1970s" of environmental law); Jerry L. Anderson, *The Environmental Revolution at Twenty-Five*, 26 RUTGERS L.J. 395, 410 (1995).

38 33 U.S.C. § 1251(a).

39 42 U.S.C. §§ 7401 et seq.

40 42 U.S.C. §§ 4321–4370(f).

41 42 U.S.C. §§ 9601–9675.

42 *See Water Permitting 101*, OFFICE OF WASTEWATER MANAGEMENT, EPA, http://water.epa.gov/polwaste/npdes/basics/upload/101pape.pdf.

43 42 U.S.C. § 4332(2)(C); *see also National Environmental Policy Act (NEPA)*, *Basic Information*, EPA, http://www.epa.gov/Compliance/basics/nepa.html.

44 42 U.S.C. §§ 9606–9609; Latham et al, *supra* note 29, at 743-46.

Act gives the Department of Agriculture the responsibility and tools to manage the nation's forests, including the use of timber for logging.[45] The Surface Mining Control and Reclamation Act, which the Department of Interior administers, regulates all aspects of mining operations and reclamation projects, including the standards mine operators must follow for mountain top mining.[46] The Oil Pollution Act requires companies to develop detailed contingency plans to contain spills, establishes a trust fund for cleaning up spills where the responsible party cannot do so, and sets forth guidance for how liability and damages are to be measured in the event of such a spill.[47]

This integrated approach of general and highly specific laws has been remarkably successful in reducing impacts of natural resource commerce on both the environment and the American public. For example, under this regime aggregate emissions of common air pollutants have been reduced by 68 percent since 1970.[48] Much of the early focus was on coal production. New technologies at coal-fired power plants that were encouraged by these laws are now capable of reducing emissions of sulfur dioxide by 98 percent, particulate matter by 99.8 percent, and nitrous oxides by 86 percent.[49] As a result, while coal use has tripled since the 1970s, regulated emissions from coal-based electricity have decreased by 40 percent.[50] Other regulatory regimes have met similar successes. In Moab, Utah, an Environmental Impact Statement developed pursuant to NEPA identified potential contamination of the Colorado River from 16 million tons of uranium mine tailings situated near the river's floodplain, allowing the development of a plan to transport this material to a safer place.[51] Further, CERCLA has been used to clean up hundreds of mines.[52]

Congress has used this same approach to tightly control risks associated with worker safety. In the 1970s, Congress established the Occupational

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45 16 U.S.C. §§ 1600–1614.

46 30 U.S.C. §§ 1201–1328.

47 33 U.S.C. § 2701 et seq. The Act also created a trust fund financed by a tax on oil to clean up spills when a responsible party is incapable or unwilling to do so.

48 *See* The U.S. Clean Air Act and the Economy, Benefits and Costs of Clean Air Act, U.S. Envtl. Prot. Agency, http://www.epa.gov/air/oaqps/permits/basic.html.

49 *See* The Facts About Air Quality and Coal-Fired Power Plants, Institute for Energy Research, http://instituteforenergyresearch.org/studies/the-facts-about-air-quality-and-coal-fired-power-plants/.

50 *See* National Mining Ass'n, Clean Coal Technology, http://www.nma.org/pdf/fact_sheets/cct.pdf (citing findings of the National Energy Technology Laboratory).

51 *See* The National Environmental Policy Act 40th Anniversary Symposium, 40 Envtl. L. Rep. News & Analysis 11183, 11189 (2010) (statement of Mary O'Brien, Utah Forests Project Manager for the Grand Canyon Trust); *see also* Moab UMTRA Project, http://moabtailings.org/ (reporting that removal of uranium tailings from the banks of the Colorado River is about 45% complete).

52 *See* Stuart Buck & David Gerard, *Cleaning Up Mining Waste*, Political Economic Research Center (Nov. 2011), at 4, http://www.perc.org/sites/default/files/rs01_1.pdf (discussing use of CERLA to clean up abandoned mines); *see also* Abandoned Mine Lands, Superfund, http://www.epa.gov/superfund/programs/aml/index.htm.

Safety and Health Administration[53] and the Federal Mine Safety and Health Administration.[54] These agencies have coordinated their respective regulatory and enforcement roles to eliminate potential inconsistency in mine operator safety standards and reduce any regulatory gaps.[55] Together, they have promulgated thousands of regulations governing workplace issues such as the appropriate head gear and footwear for mineworkers, as well as requiring safety features on the tools that mineworkers use.[56] Their regulations have helped reduce workplace fatalities by more than 65% and occupational injury and illness by 67%.[57] Overall, mineworker injuries in the United States have dropped from a peak of 3,242 work-related fatalities in 1907, when the nation had its single deadliest mine disaster,[58] to only twenty work-related fatalities in 2013.[59] Overall, mining has become "one of the most heavily regulated industries in the United States."[60]

Congress's response to today's new energy sources demonstrates its ongoing commitment to manage these benefits and risks.[61] A new method for extracting oil and natural gas is hydraulic fracturing, commonly referred to as "fracking," which involves blasting a pressurized liquid made of water, sand, and chemicals deep underground to release the oil and gas in subterranean rocks. EPA is studying fracking "to provide oversight, guidance and, where appropriate, rulemaking" to reduce any potential impacts on drinking water, surface and ground water, and air pollution.[62] Government

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53 *See* Occupational Safety and Health Act of 1970, Pub. L. No. 91-596 (codified at 29 U.S.C. § 651 et seq).

54 *See* Federal Mine Safety and Health Act of 1977, Pub. L. No. 91-173, § 2.

55 *See* Interagency Agreement Between the Mine Safety and Health Administration, U.S. Department of Labor, and Occupational Safety and Health Administration, OSHA, https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=MOU&p_id=222.

56 *See OSHA Law & Regulations*, OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, U.S. DEPT. OF LABOR, https://www.osha.gov/law-regs.html.

57 *See Commonly Used Statistics*, OCCUPATIONAL SAFETY & HEALTH ADMINISTRATION, U.S. DEPT. OF LABOR, https://www.osha.gov/oshstats/commonstats.html.

58 *See* Assoc. Press, *Deadliest Recent U.S. Mine Accidents*, msnbc.msn.com, (Apr. 6, 2010), http://www.msnbc.msn.com/id/36192868/ns/us_news-life/t/deadliest-recent-us-mine-accidents/ (noting that 362 miners were killed in an explosion near Monongah, West Virginia in 1907).

59 *See Coal Fatalities for 1900 Through 2014*, MINE SAFETY & HEALTH ADMIN, http://www.msha.gov/stats/centurystats/coalstats.asp.

60 A. Brooke Rubenstein & David Winkowski, *A Mine is a Terrible Thing to Waste: Past, Present and Future Reclamation Efforts to Correct the Environmentally Damaging Effects of Coal Mines*, 13 VILL. ENVT'L L.J. 189 (2002) (discussing regulation of the coal industry).

61 *See* Eugene E. Smary et al., *The Convergence of Mining Law and Environmental Law*, Rocky Mountain Mineral Law Foundation, International Mining and Oil & Gas Law, Development, and Investment, Paper No. 8B (2011) (discussing integration of natural resource extraction laws with modern environmental laws).

62 Natural Gas Extraction – Hydraulic Fracturing, Envtl. Prot. Agency, http://www2.epa.gov/hydraulicfracturing; *see also* Effluent Limitations Guidelines and New Source Performance Standards for the Oil and Gas Extraction Point Source Category, 40 C.F.R Parts 9 and 435 (2001), http://www.gpo.gov/fdsys/pkg/FR-2001-01-22/pdf/01-361.pdf; Oil and Gas Extraction Effluent

agencies are also managing risks posed by renewable energy sources such as solar energy production and wind farms.[63] Solar energy installations, for example, can strain water resources, and wind farms can adversely impact wildlife.[64] When such new risks arise, they are initially governed under the general guidelines provided by the CWA, CAA, NEPA, and CERCLA. Should these regulatory regimes prove insufficient, Congress can enact tailored regulations to manage them.

Over the years, the American people have directly benefited from this active partnership between their government and the private sector over how best to manage the nation's natural resources. The federal government owns about 28% of the country's total land,[65] about two-thirds of which is available for the extraction or harvesting of natural resources.[66] As indicted, the government has entered lease agreements for royalty payments tied to the extraction of dozens of minerals, which produces more than $11 billion annually for the federal government.[67] Fossil fuels used for energy production—namely oil, gas, natural gas liquids, and coal—account for approximately 98% of these royalties.[68] The result has been a highly advanced economy, high standards of living for the American people, and a comprehensive risk management system for America's natural resources.

The question then is whether regulation through litigation is needed beyond government oversight and control. This article will next explore the value of private lawsuits seeking to regulate the extraction and use of natural resources through litigation.

Guidelines, Envtl. Prot. Agency, http://water.epa.gov/scitech/wastetech/guide/oilandgas/ (stating that EPA is developing rules to address wastewater discharges produced by "unconventional extraction").

63 *See* Glaser et al., *supra* note 3, at 198-200 (discussing impacts of wind and solar energy production).

64 *See id.*; *Renewable Electricity Generation*, OFFICE OF ENERGY EFFICIENCY & RENEWABLE ENERGY, http://energy.gov/eere/renewables.

65 *See Federal Land Ownership: Overview and Data*, Congressional Research Service (Feb. 8, 2012), at 1, https://www.fas.org/sgp/crs/misc/R42346.pdf.

66 *See* Davis, *supra* note 11, at 340 (estimating percentage of federally managed land available for resource extraction and related activities based on data published by General Accounting Office); *see also Land Ownership: Information on the Acreage, Management and Use of Federal and Other Lands*, U.S. Gen. Accounting Office (1996), at 2, http://www.gao.gov/archive/1996/rc96040.pdf.

67 *See Leasing Minerals on Federal and Indian Lands: Briefing for Congressional Requestors*, Government Accountability Office, GAO-13-45R Mineral Resources (June 2012), at 11, http://www.gao.gov/products/GAO-13-45R ("The resulting revenue from mineral leasing activity on federal and Indian lands in fiscal years 2010 and 2011 was $11.3 billion and $11.4 billion, respectively.").

68 *See id.* at 37.

II. ENGINE NO. 1 – LIABILITY FOR NATURAL RESOURCE "PRODUCTS"

Groups opposed to the use of certain natural resources, as well as individuals alleging injury from their use, have sought to impose liability against the companies that extract, supply, or use natural resources.[69] In the 1960s, when courts were first developing the doctrine of strict products liability, lawsuits sought to take advantage of the law's early malleability by alleging injury related to natural resource "products."[70]

The American Law Institute's (ALI) *Restatement (Second) of Torts* provided the blueprint from which a majority of state high courts have recognized strict products liability.[71] Under Section 402A of this Restatement, a manufacturer can be subject to liability for defects in a product's manufacture, design, or warning.[72] The ALI did not specifically address the application of this liability regime to suppliers of naturally occurring raw materials.[73] The only issue Section 402A spoke to with respect to natural resources was the inappropriateness of liability where a raw material is incorporated into a product as a component part.[74]

In its origins, the focus of product liability was on manufactured products, not natural resources.[75] Unlike manufactured products, there is no

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69 *See* Victor E. Schwartz & Christopher E. Appel, *Exporting United States Tort Law: The Importance of Authenticity, Necessity, and Learning from Our Mistakes*, 38 PEPP. L. REV. 551, 553-54 (2011) (discussing history of strict products liability law); Latham et al., *supra* note 29, at 743-46 (discussing history of "watershed" environmental laws).

70 *See* William Prosser, *The Fall of the Citadel (Strict Liability to the Consumer)*, 50 MINN. L. REV. 791 (1966); *see also* William Prosser, *The Assault Upon the Citadel (Strict Liability to the Consumer)*, 69 YALE L.J. 1099 (1960).

71 *See* Victor E. Schwartz, *The Restatement (Third) of Torts: Products Liability—The American Law Institute's Process of Democracy and Deliberation*, 26 HOFSTRA L. REV. 743, 745-46 (1998) (discussing influence of § 402A); *see also* John W. Wade, *On the Nature of Strict Tort Liability for Products*, 44 MISS. L.J. 825, 829 (1973).

72 *See* Restatement (Second) of Torts § 402A. In adopting § 402A, the American Law Institute (ALI) principally relied on the California Supreme Court's decision in Greenman v. Yuba Power Products, Inc., 377 P.2d 897 (Cal. 1963). This decision was authored by the court's chief justice, Roger Traynor, who was also an Advisor to the ALI project. *See* Schwartz & Appel, *supra* note 69, at 554.

73 *See* Restatement (Second) of Torts § 402A caveat (stating that the ALI expresses no opinion on whether strict liability applies to the seller of a product "expected to be processed or otherwise substantially changed before it reaches the user or consumer"); *see also* Restatement (Second) of Torts § 388 (discussing liability of suppliers).

74 *Id.* at cmt. p ("[T]he manufacturer of pigiron, which is capable of a wide variety of uses, is not so likely to be held to strict liability when it turns out to be unsuitable for the child's tricycle into which it is finally made by a remote buyer.").

75 *See* M. Stuart Madden, *Liability of Suppliers of Natural Raw Materials and the Restatement (Third) of Torts: Products Liability – A First Step Towards Sound Public Policy*, 30 U. MICH. J.L. REF. 281, 295-96 (1997); Charles E. Cantu, *The Illusive Meaning of the Term "Product" Under Section 402A of the Restatement (Second) of Torts*, 44 OKLA. L. REV. 635, 656, 658 (1994) (discussing "unusual results" by courts in interpreting definition of "product" under § 402A).

"human judgment" that goes into making natural resources.[76] Courts concluded that natural resources cannot be "mis-manufactured" or differently "designed," so there can be no manufacture or design defect.[77] Iron is iron, coal is coal, and sand is sand.

To the extent raw materials were included in products or sold themselves, courts found their risks were better addressed by concepts reflected in comment *i* of Section 402A, which states that liability, shall not be imposed for inherent product characteristics.[78] A comparable limit on liability for inherent characteristics is set forth in the *Restatement of Torts, Third: Products Liability* with respect to category liability.[79] These are lawful products which have no reasonable alternative design, and cannot be made reasonably safe through instructions or warnings.

Typically, raw material suppliers send their materials either to industrial users of raw materials or manufacturers of products that incorporate raw materials.[80] The supplier's warnings obligation has traditionally been to adequately warn these corporate customers of risks that may not be generally known, though courts appreciated early on that it can be infeasible to attach warnings to certain raw materials, such as a lump of coal or grain of sand.[81] Further, under the sophisticated purchaser doctrine, a supplier owes no duty to warn where the recipient knows or should know of these risks.[82] Consider the example of sand, which can pose a health hazard if reduced to a respirable state during manufacturing.[83] Industrial workers have brought

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76 *See id.*; *cf.* Wyrulec Co. v. Schutt, 866 P.2d 756, 760 (Wyo. 1993) (holding strict liability doctrine inapplicable against electrical utility because electricity was not "a product").

77 *See id.* at 285; *see also* Restatement (Third) of Torts: Product Liability § 5 cmt. c ("[A] basic raw material such as sand, gravel, or kerosene cannot be defectively designed."); Victor E. Schwartz, *Unavoidably Unsafe Products: Clarifying the Meaning and Policy Behind Comment K*, 42 WASH. & LEE L. REV. 1139 (1985).

78 *See* Restatement (Second) of Torts § 402A cmt. i (1965).

79 *See* Restatement (Third) of Torts: Product Liability § 2 cmt. e (1998).

80 *See* Victor E. Schwartz & Christopher E. Appel, *Effective Communication of Warnings in the Workplace: Avoiding Injuries in Working with Industrial Materials*, 73 MO. L. REV. 1, 4-9 (2008) (discussing practical impediments to communicating effective warnings); Victor Schwartz & Russell Driver, *Warnings in the Workplace: The Need for a Synthesis of Law and Communication Theory*, 52 U. CIN. L. REV. 38, 39 (1983).

81 *See id.*; *see also* Bond v. E.I. DuPont De Nemours & Co., 868 P.2d 1114, 1120-21 (Colo. Ct. App. 1993) ("[T]here is little social utility in placing the burden on a manufacturer of component parts or supplier of raw materials of guarding against injuries caused by the final product when the component parts or raw materials themselves were not unreasonably dangerous.").

82 *See, e.g.,* Jodway v. Kennametal, Inc., 525 N.W.2d 883 (Mich. Ct. App. 1994) (purchaser of raw cobalt was "sophisticated user" such that material supplier did not have duty to warn of risks involved with use of product). The sophisticated user doctrine is also referred to by some courts as the "knowledgeable" or "responsible" user/intermediary doctrine. *See, e.g.*, Rivers v. AT & T Techs., Inc., 554 N.Y.S.2d 401, 403 (1990) (employing the term "responsible intermediary").

83 *See, e.g.,* Bergfeld v. Unimin Corp., 319 F.3d 350, 352 (8th Cir. 2003); Haase v. Badger Mining Corp., 682 N.W.2d 389, 392 (Wis. 2004); Damond v. Avondale Indus., Inc., 773 So. 2d 266, 267 (La. Ct. App. 2000).

personal injury claims against sand providers, and some courts have determined that a sand supplier must provide warnings to employees of raw material purchasers where the supplier knows how the sand will be processed.[84] Other examples of such liability involving plant workers include suppliers of metals,[85] raw asbestos,[86] and other substances that can cause harm depending on how used.[87]

Courts have found that a raw material supplier's obligation to warn does not extend to ordinary consumers of products that may include its materials. In these situations, the supplier generally lacks control over, or may not know, how the raw material will be used and may not be able to identify or communicate with its end user.[88] Several legal doctrines have emerged to place the responsibility to provide warnings to downstream product users with the manufacturer in the "best position" to effectively warn.[89] For ex-

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84 *See, e.g.,* Humble Sand & Gravel, Inc. v. Gomez, 146 S.W.3d 170, 194 (Tex. 2004) (remanding case for new trial to determine whether sand supplier owed duty to warn their customers' employees); Gray v. Badger Mining Corp., 676 N.W.2d 268, 271 (Minn. 2004) (finding genuine issues of material fact existed as to whether sand supplier's warnings to intermediary were adequate).

85 *See, e.g.,* Whitehead v. St. Joe Lead Co., Inc., 729 F.2d 238, 249-250, 254 (3rd Cir. 1984) (rejecting substantial change in condition and open and obvious risk doctrines alleged by supplier of lead to industrial plant); Skinner v. Derr Const. Co., 937 So. 2d 430, 437 (La. Ct. App. 2006) (denying summary judgment to supplier of fabricated steel alleged to have caused construction accident).

86 *See, e.g.,* Arena v. Owens Corning Fiberglas Corp., 74 Cal. Rptr. 2d 580, 582 (Cal. Ct. App. 1998) ("We conclude that a supplier of raw asbestos is subject to strict products liability."); Jenkins v. T & N PLC, 53 Cal.Rptr.2d 642, 647 (Cal. App. Ct. 1996) ("As a matter of law, a bulk supplier of raw asbestos fiber incorporated into a finished product can be subject to strict products liability to an individual suffering from a disease caused by exposure to the supplier's asbestos."); *but see* Cimino v. Raymark Indus., Inc. 151 F.3d 297, 335 (5th Cir. 1998) (holding that it would create an unbearable burden on the manufacturer of the raw asbestos "building block" material later incorporated into insulating sheets by requiring the purchaser/employer to warn on every possible use); Riggs v. Asbestos Corp. Ltd., 304 P.3d 61, 69 (Utah Ct. App. 2013) (stating that supplier's asbestos "product could not be defectively designed or manufactured because it is a raw, unadulterated material").

87 *See, e.g.,* Donahue v. Phillips Petroleum Co., 866 F.2d 1008, 1012 (8th Cir. 1989) (affirming jury verdict against a bulk supplier of liquid propane); Jones v. Hittle Serv., Inc., 549 P.2d 1383, 1395 (Kan. 1976) (finding bulk supplier of liquid propane only fulfills his duty to warn consumers "when he ascertains that the distributor to whom he sells is adequately trained" and "capable of passing his knowledge on to his customers"); Messer Grieshiem Indus., Inc. v. Eastman Chem. Co., 194 S.W.3d 466, 483 (Tenn. Ct. App. 2005) (vacating trial court's grant of summary judgment to supplier of liquid carbon dioxide on negligence and product liability claims made by distributor); *but see* York v. Union Carbide Corp., 586 N.E.2d 861 (Ind. Ct. App. 1992) (rejecting negligence and strict product liability claims against supplier of argon gas); Jackson v. Reliable Paste & Chem. Co., 483 N.E.2d 939, 942-43 (Ill. App. Ct. 1985) (finding supplier of methanol owed no duty to warn purchaser of chemical's explosive and flammable propensities).

88 *See, e.g.,* Maxton v. Western States Metals, 136 Cal. Rptr. 3d 630, 632-33 (Cal. Ct. App. 2012) ("Generally suppliers of raw materials to manufacturers cannot be liable for negligence or under a strict products liability theory to the manufacturers' employees who sustain personal injuries as a result of using the raw materials in the manufacturing process.").

89 *See id.*; Madden, *supra* note 75, at 291 ("In the thirty years following publication of section 402A, judicial decisions have followed two paths toward excluding raw materials sellers from design or

ample, the raw material supplier doctrine discharges the supplier's duty to warn consumers or other downstream product users where the immediate purchaser of the raw material receives an adequate warning.[90] Also, the "substantial change in condition" doctrine states that a supplier's duty to warn end users is discharged if the product or material undergoes a substantial change after leaving a supplier's hands.[91] Further, a natural resource supplier does not have a duty to warn downstream users of "open and obvious" dangers.[92]

Despite these bedrock principles, individuals and interest groups have sometimes doggedly pursued suppliers of raw materials in their litigations. One such instance occurred in the 1990s with silicone, which was used as a component part for medical implants.[93] While the raw material suppliers were ultimately not subject to liability, they had to incur significant legal costs to defend the onslaught of cases. When some suppliers stopped making the material available for medical devices in order to avoid being sued, Congress enacted the Biomaterials Access Assurance Act of 1998[94] to clarify that suppliers of raw materials in medical implants are not subject to liability.[95] The legislation worked, and extractors of raw materials once again supplied those materials to manufacturers of medical devices.

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warnings liability – de jure immunity or de facto immunity."); Edward M. Mansfield, *Reflections on Current Limits on Component and Raw Material Supplier Liability and the Proposed Third Restatement*, 84 KY. L.J. 221, 241-45 (1995-96) (discussing reasons courts developed doctrines limiting product liability for raw material suppliers).

90 *See id.*

91 Restatement (Second) of Torts § 402A(1)(b); *see id.* at cmt. p; *see also* Walker v. Stauffer Chem. Corp., 96 Cal. Rptr. 803, 806 (Cal. Ct. App. 1971) (holding that substantial changes made by purchaser of sulfuric acid supplied in bulk discharged supplier duty to warn); *cf.* Haase, 682 N.W.2d at 392 (finding silica sand supplier not subject to liability for worker's silicosis because sand underwent a substantial change after leaving supplier's possession).

92 Restatement (Second) of Torts § 402A cmt. j (stating there is no duty to warn "when the danger, or potentiality of danger, is generally known and recognized").

93 *See* Daniel Q. Posin, *Silicone Breast Implant Litigation and My Father-in-Law: A Neo-Coasen Analysis*, 70 TUL. L. REV. 2565, 2571-72 (1996). The types of medical implants featuring silicone as the primary component include: heart pacemakers, mechanical valves, heart-lung oxygenators used during open-heart surgery, chin and cheek implants for accident victims, certain contact lenses, devices used for brain surgery, urological surgery instruments, and prosthetic joints all feature silicone plastics. *See id.* at 2572 n.30; *see also* W. Snyder, *Silicone Breast Implants: Can Emerging Medical, Legal, and Scientific Concepts Be Reconciled?*, 18 J. LEGAL MED. 133, 136 (1997) (stating that "over 500 medical products contain measurable amounts of silicone").

94 *See* Pub. L. 105-230 (Aug. 13, 1998), 112 Stat. 1519 (codified at 21 U.S.C. §§ 1601-1606); *see also* Artiglio v. Gen. Elec. Co., 71 Cal. Rptr. 2d 817, 822 (Cal. Ct. App. 1998) (granting summary judgment to supplier of silicone used in medical breast implants).

95 *See id.*; *see also* FDA, Medical Devices Draft Guidance for the Implementation of the Biomaterials Access Assurance Act, 66 Fed. Reg. 17562 (Apr. 2, 2001); Ann M. Murphy, *The Biomaterials Access Assurance Act of 1998 and Corporate Supplier Liability: Who You Gonna Sue?*, 25 DEL. J. CORP. L. 715 (2000).

Around the same time, the American Law Institute published the *Restatement of Torts Third: Products Liability*.[96] The Restatement Third addressed this issue head on, making clear that "decisions regarding the use of such [raw] materials are not attributable to the supplier of the raw materials but rather to the fabricator that puts them to improper use."[97] The Restatement further recognizes that "a basic raw material such as sand, gravel, or kerosene cannot be defectively designed" and that "[t]o impose a duty to warn would require the seller to develop expertise regarding a multitude of different end products and to investigate the actual use of raw materials by manufacturers over whom the supplier has no control."[98] The Restatement concluded that courts should not "impose such an onerous duty to warn."[99] Thus, attempts to subject suppliers of natural resources to product liability have generally failed.

III. ENGINE NO. 2 – LIABILITY FOR NATURAL RESOURCE EXTERNALITIES

A second engine of litigation against suppliers of raw materials has focused on conduct-based theories, such as public nuisance, for the externalities associated with the use of natural resources.[100] This effort is still going on today, with a number of suits directed at burning fossil fuels to produce energy.[101] Environmental groups often sponsor these lawsuits as agenda-driven efforts to regulate the use of fossils fuels through the courts. They combine ideological-based arguments with creative tort theories in the hopes of persuading judges to circumvent, or put pressure on, Congressional decisions regarding the use of natural resources.[102]

As with product cases, this effort also had its roots in the 1960s. When the Restatement (Second) of Torts was being drafted, environmental lawyers started a campaign to transform public nuisance from a restrained government tort into a tool for requiring businesses to remediate environ-

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96 *See* Restatement (Third) of Torts: Products Liability § 5 (1997) (liability of sellers of component products integrated into a finished product).

97 *Id.* at cmt. c.

98 *Id.*

99 *Id.*

100 *See* Victor E. Schwartz, Phil Goldberg, & Christopher E. Appel, *Can Governments Impose a New Tort Duty to Prevent External Risks? The "No-Fault" Theories Behind Today's High-Stakes Government Recoupment Suits*, 44 WAKE FOREST L. REV. 923, 940-45 (2009) (discussing use of public nuisance theory in lawsuits seeking to impose liability against private companies for external risks associated with product uses).

101 *See* Victor E. Schwartz, Phil Goldberg, & Christopher E. Appel, *Does the Judiciary Have the Tools for Regulating Greenhouse Gas Emissions?*, 46 VAL. U. L. REV. 369, 369-70 (2012) (discussing public nuisance climate change litigation).

102 *See id.* at 379-80 (explaining how climate change litigation is a result of frustrations by environmental advocates over incremental approach to regulating fossil fuel emissions).

mental conditions, regardless of wrongdoing or causation.[103] In essence, they sought to capitalize on the amorphous nature of the word "nuisance." As prominent legal observers have noted, "There is perhaps no more impenetrable jungle in the entire law than that which surrounds the word 'nuisance.' It has meant all things to all people."[104] The first act of these environmental lawyers was to pursue changes to public nuisance chapters of the Restatement in hopes of breaking "the bounds of traditional public nuisance."[105] Among other things, they lobbied to remove wrongful conduct requirements so claims could be brought even when defendants engaged in lawful commerce.

Although fully presented, none of their changes were adopted in the black letter of the Restatement. The law of public nuisance has developed clear elements and standards over the course of centuries of jurisprudence.[106] The tort is designed to address quasi-criminal conduct that, while not illegal, is unreasonable given the circumstances and could cause injury to someone exercising a common, societal right.[107] Traditional examples of public nuisances include blocking a public roadway, dumping sewage into a public river, or blasting a stereo when people are picnicking in a public park.[108] Thus, natural resource providers engaging in lawful commerce were not the intended targets of public nuisance liability. Nevertheless, the efforts to turn public nuisance into a "super tort" for regulating environmental policy through the courts focused on the use of fossil fuels for energy production.[109]

The first test case for these theories, *Diamond v. General Motors Corp.*, was brought in the early 1970s. The plaintiffs were environmentalists and pursued hundreds of companies that sold products or engaged in activities that they claimed collectively caused smog to form in and around

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103 *See* Denise E. Antolini, *Modernizing Public Nuisance: Solving the Paradox of the Special Injury Rule*, 28 ECOL. L.Q. 755, 838 (2001).

104 W. Page Keeton et. al., Prosser & Keeton on Torts 616 (5th ed. 1984); *see also* F.H. Newark, *The Boundaries of Nuisance*, 65 L.Q. REV. 480, 480 (1949) (calling public nuisance a "mongrel" tort for being "intractable to definition").

105 Antolini, *supra* note 103, at 838.

106 *See* Victor E. Schwartz & Phil Goldberg, *The Law of Public Nuisance: Maintaining Rational Boundaries on a Rational Tort*, 45 WASHBURN L.J. 541, 562-70 (2006) (discussing traditional elements of public nuisance).

107 *See id.* at 564-65; *see also* Donald G. Gifford, *Public Nuisance as a Mass Products Liability Tort*, 71 U. CIN. L. REV. 741, 745-46 (2003) ("Historically, public nuisance most often was not regarded as a tort, but instead as a basis for public officials to pursue criminal prosecutions or seek injunctive relief to abate harmful conduct. Only in limited circumstances was a tort remedy available to an individual, and apparently never to the state or municipality.").

108 *See id.* at 541-42; *see also* Restatement (Second) of Torts § 821A cmt. b (1979).

109 *See* Schwartz & Goldberg, *supra* note 106, at 522 ("The reason personal injury lawyers have been lured by the elixir of public nuisance theory is because, if successful, it acts as a 'super tort.' As with products liability, public nuisance theory offers [essentially] strict liability."); *see also* Gifford, *supra* note 107, at 741.

Los Angeles for injunctive relief and billions of dollars in damages.[110] The California court dismissed the claims, concluding that such rudderless use of liability without appreciable standards was inconsistent with public nuisance law. As the court stated, a "system of statutes and administrative rules" governed emissions, and the plaintiffs were "simply asking the court to do what the elected representatives of the people have not done: adopt stricter standards over the discharge of air contaminants in this county, and enforce them with the contempt power of the court."[111] The court further addressed the unsound public policy implications of the requested relief: "The immediate effect of . . . an injunction would be to halt the supply of goods and services essential to the life and comfort of the persons whom plaintiff seeks to represent."[112]

For a couple of decades after this ruling, most efforts to expand public nuisance liability focused on potentially harmful products, such as tobacco, guns, lead paint, and MTBE.[113] In the last decade, though, two new waves of public nuisance actions have targeted environmental policy. These lawsuits have sought to subject private businesses to tort liability for risks allegedly associated with using natural resources, namely allegations related to global climate change and regional impacts from EPA-permitted power plants.

A. *Global Climate Change Litigation*

In the early 2000s, plaintiffs' lawyers and environmental advocates frustrated with their inability to achieve carbon dioxide emission limits through Congress turned to the courts. They filed four major lawsuits against private-sector entities—namely the nation's largest utility, energy, and automobile companies—to impose emission requirements through tort law.[114] These suits generally claimed that the defendants caused or will cause climate change injuries by engaging in operations that contribute to

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110 *See* Diamond v. General Motors Corp., 97 Cal. Rptr. 639, 641 (Ct. App. 1971) (seeking an injunction against 293 named corporations and municipalities, as well as 1,000 unnamed defendants, for air pollution).

111 *Id.* at 645.

112 *Id.* at 644.

113 *See* Schwartz & Goldberg, *supra* note 106, at 554-61.

114 *See generally* Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265 (S.D.N.Y. 2005), *vacated*, 582 F.3d 309 (2d Cir. 2009), *rev'd*, 131 S. Ct. 2527 (2011); California v. Gen. Motors Corp., No. C06-05755 MJJ, 2007 WL 2726871 (N.D. Cal. Sept. 17, 2007); Native Vill. of Kivalina v. ExxonMobil Corp., 663 F. Supp. 2d 863 (N.D. Cal. 2009), *aff'd*, 696 F.3d 849 (9th Cir. 2012); Comer v. Murphy Oil USA, Inc., No. 1:05-CV-436, 2007 WL 6942285 (S.D. Miss. Aug. 30, 2007) *rev'd*, 585 F.3d 855 (5th Cir. 2009), *appeal dismissed*, 607 F.3d 1049 (5th Cir. 2010) ("Comer I"); Comer v. Murphy Oil USA, Inc., 839 F. Supp. 2d 849 (S.D. Miss. 2012), aff'd, 718 F.3d 460 (5th Cir. 2013) ("Comer II").

the build-up of greenhouse gases (GHGs) in the atmosphere, which they classified as a public nuisance under American tort law.[115] Federal district court judges in each case dismissed the claims as non-justiciable.[116] They concluded that balancing emission levels with energy needs was an inherently political function.[117]

The most prominent of the suits was *Connecticut v. American Electric Power, Co.*, where several state attorneys general sued six major electric utilities to force them to reduce emissions of carbon dioxide and other so-called greenhouse gases (GHG).[118] Specifically, the suit sought to use the injunctive relief and abatement remedies under public nuisance theory to impose court ordered emission reductions for each year over a ten year period. In 2011, the Supreme Court of the United States unanimously rejected the suit on federal displacement grounds, concluding that Congress delegated the authority to regulate emissions to EPA in the Clean Air Act and displaced any federal common law causes of action related to these emission standards.

The Court, in an opinion written by Justice Ginsburg, directly addressed the driving force behind these lawsuits. It stated that there is "no room for a parallel track" of tort litigation for GHG emissions.[119] As the Court explained, the judiciary does not have the institutional competence to determine "[t]he appropriate amount of regulation" for carbon dioxide emissions or undertake the "complex balancing" required to weigh the impact of that decision on the "energy needs" of the American people.[120] Unlike Congress, courts are "confined by a record comprising the evidence the parties present," and "may not commission scientific studies or convene groups of experts for advice, or issue rules under notice-and-comment procedures inviting input by any interested person, or seek the counsel of regulators" that would facilitate an objective, comprehensive evaluation of GHG emissions.[121] Thus, "judges lack the scientific, economic, and technological resources" to manage these issues.[122] The Court concluded that setting GHG emission levels "is undoubtedly an area 'within national *legislative* power.'"[123]

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115 *See* Schwartz et al., *supra* note 101, at 382-83.

116 *See Kivalina*, 663 F. Supp. 2d at 883; *Gen. Motors Corp.*, 2007 WL 2726871, at *16; *Comer I*, 2007 WL 6942285, at *1; *Am. Elec. Power Co.*, 406 F. Supp. 2d at 274.

117 *See id.*

118 *Am. Elec. Power Co*., 131 S. Ct. at 2534 (noting that the plaintiffs sought injunctive relief requiring the defendants to reduce their carbon dioxide emissions for "at least a decade") (internal quotation marks omitted).

119 *Id.* at 2538.

120 *Id.* at 2527, 2539.

121 *Id.*

122 *Id.* at 2539-40.

123 *Id.* at 2535 (emphasis added) (quoting Henry J. Friendly, *In Praise of Erie- And of the New Federal Common Law*, 39 N.Y.U. L. REV. 383, 421 (1964)).

The other global climate change tort cases, while seeking the same result, were packaged differently. Two of them sought monetary damages for individuals claiming climate change injuries. In *Native Village of Kivalina v. ExxonMobil Corp.*,[124] the Alaskan Village of Kivalina sued dozens of oil, gas and coal producers for "causing" global climate change and, accordingly, the polar ice wall protecting their village in the Arctic Sea to melt. They were suing for the cost of moving their village to a less vulnerable area. The U.S. Court of Appeals for the Ninth Circuit dismissed the case in 2012, the year after the Supreme Court ruled in *AEP v. Connecticut*. The Ninth Circuit explained that if the Supreme Court has determined that Congress's delegation of GHG emission regulations to EPA did not leave room for a federal common law cause of action, then "it would be incongruous to allow it to be revived in another form."[125]

In *Comer v. Murphy Oil USA, Inc.*,[126] Mississippi homeowners filed a purported class action arguing that a group of energy companies should have to pay for Hurricane Katrina's damage to their properties. Their theory was that global climate change made Hurricane Katrina more intense and the companies should have to pay for the damage caused by that increased intensity. The U.S. Court of Appeals for the Fifth Circuit dismissed the case in 2013 after several procedural oddities.

The final case was *California v. General Motors Corp.*, where the California attorney general sought to subject car manufacturers to liability for making cars that emit GHGs through vehicle exhaust.[127] This case was dismissed after the trial court held that it was inappropriate to expose automakers to liability "for doing nothing more than lawfully engaging in their respective spheres of commerce."[128]

An interesting aspect of these cases is that the plaintiffs' lawyers generally acknowledged that their goals were, in fact, political and that they were intentionally trying to circumvent Congress and regulate GHG emissions in the courts. Then-Connecticut Attorney General Richard Blumenthal said his suit against *American Electric Power Co.* was based on his "gut feeling [and] emotion, that CO_2 pollution and global warming were problems that needed to be addressed," that action "wasn't coming from the federal government," and several people were "brainstorming about what could be done."[129] The lead plaintiffs' attorney in *Comer* said that his "primary goal was to say [to the defendants that] you are at risk within the legal

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124 *Kivalina*, 663 F. Supp. 2d at 868-69.

125 *Kivalina*, 696 F.3d at 857.

126 *See Comer I*, 2007 WL 6942285, at *1; *Comer II*, 839 F. Supp. 2d at 853-54.

127 2007 WL 2726871, at *1.

128 *Id.* at *14 (citation omitted).

129 Symposium, *The Role of State Attorneys General in National Environmental Policy*, 30 COLUM. J. ENVTL. L. 335, 339 (2005).

system and you should be cooperating with Congress, the White House and the Kyoto Protocol."[130]

In all four cases, the courts recognized that a key problem with these cases is that in order to fashion a remedy to the allegations, courts would have to set emission levels for each defendant. America's energy policy, they concluded, should not be haphazardly set on a case-by-case basis based solely on whomever the plaintiffs named and over a narrow set of environmental allegations. These decisions belonged in Congress, which can hear from the many stakeholders and weigh the many factors that go into setting the nation's energy policy. Environmental policy is important, but so too, for example, are affordability and energy independence. Thus, regardless of the tort, whether plaintiffs are public or private entities, and whether the remedies sought are injunctive relief or monetary damages, courts should not regulate emissions through tort law.

B. *Litigation Targeted at Local Impacts of Natural Resource Use*

The past decade has also seen lawsuits where plaintiffs' lawyers and environmentalists sue power plants over allegations related to the local impact of traditional emissions. These emissions are highly regulated under EPA's permitting programs. Power plants are allowed certain emissions, and setting these emission levels is part of the balancing that Congress has empowered to federal regulators. In these lawsuits, though, communities around the power plants are asking the courts to second guess the EPA and make their own determination as to what levels of emissions are "unreasonable" such that they can give rise to liability. The result of these lawsuits, therefore, would be the same as with the climate change suits: courts would have the ultimate decision on setting emission levels critical to America's energy policy.

The first major case of this nature was *North Carolina ex rel. Cooper v. Tennessee Valley Authority,*[131] where North Carolina's attorney general sought an injunction against the Tennessee Valley Authority (TVA) related to its operation of eleven coal-fired power plants.[132] The suit alleged that emissions from these plants, several of which were located in neighboring Alabama and Tennessee within 100 miles of the North Carolina border, "contributed significantly" to air pollution in North Carolina and constitut-

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130 Mark Schleifstein, *Global Warming Suit Gets Go-Ahead*, Times-Picayune, Oct. 17, 2009, at 3, available at 2009 WLNR 20528599; *see also* Chris Joyner, *Lawsuits Place Global Warming on More Dockets*, USA TODAY (Nov. 23, 2009) at 5A, *available at* 2009 WLNR 23599365 (reporting Mr. Maples as conceding the legality of the defendants' conduct).

131 North Carolina ex rel. Cooper v. TVA, 593 F. Supp. 2d 812 (W.D. N.C. 2009), *rev'd*, 615 F.3d 291 (4th Cir. 2010), *cert. denied*, 132 S. Ct. 46 (2011).

132 *See id.* at 815.

ed a public nuisance.[133] The injunction would require the TVA to implement more than $1 billion in technology improvements to reduce emissions.[134]

In 2010, the U.S. Court of Appeals for the Fourth Circuit rejected this lawsuit, holding that the Clean Air Act's permitting program preempted these state tort claims.[135] In issuing its ruling, the court detailed the complex regulatory regime under the Clean Air Act governing these emissions. The Fourth Circuit explained that under the National Ambient Air Quality Standards (NAAQS), EPA works closely with states to develop State Implementation Plans (SIPs) to determine how much of which substances plants of all types in their states can emit. EPA then issues site-specific permits that establish the reasonable, allowable emissions for each plant. Thus, as part of this process, EPA involved state regulators, meaning that state and local communities already contributed to the determination of how such risks were to be handled. These regulations represent "decades of thought by legislative bodies and agencies" and are designed to facilitate commerce while reducing emissions over time.[136]

The Fourth Circuit concluded that were it to rule otherwise, courts could "scuttle the nation's carefully created system for accommodating the need for energy production and the need for clean air."[137] "TVA's plants cannot logically be public nuisances under Alabama and Tennessee law where TVA is in compliance with EPA NAAQS, the corresponding state SIPs, and the permits that implement them."[138] "If courts across the nation were to use the vagaries of public nuisance doctrine to overturn the carefully enacted rules governing airborne emissions, it would be increasingly difficult for anyone to determine what standards govern."[139] The result would be "multiple and conflicting standards," and "[e]nergy policy cannot be set, and the environment cannot prosper, in this way."[140]

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133 North Carolina ex rel. Cooper, 615 F.3d at 298.

134 *See id.* (noting that "even North Carolina admits [the cost] will be over a billion dollars, while TVA estimates that the actual cost will be even higher"). The Federal District court acknowledged that the "ancient common law of public nuisance is not ordinarily the means by which such major conflicts among governmental entities are resolved in modern American governance," but nevertheless decided that it could adopt a "plant-by-plant analysis" of whether regulated emissions amounted to an unreasonable interference on North Carolina's citizens. The court made its own determination that, despite the fact that the TVA was operating pursuant to Clean Air Act permits, emissions from four of the plants produced sufficient "negative effects on human health" to constitute a violation of public nuisance law of the state in which the power plants were located. It then issued an injunction against these four power plants, which were located in Alabama and Tennessee.

135 *See id.*

136 *Id.* at 298.

137 *Id.*

138 *Id.* at 310.

139 *Id.*

140 *Id.* at 298, 302 ("a patchwork of nuisance injunctions could well lead to increased air pollution").

In 2012, property owners within one mile of a coal-fired power plant in Pennsylvania brought a putative class action against the facility also for local impacts of the power plant.[141] As with the TVA case, the plaintiffs in this case, in *Bell v. Cheswick Generating Station*, sought injunctive relief that would allow the plant to operate so long as it implemented more advanced pollution-control technologies.[142] The *Bell* plaintiffs also sought compensatory and punitive damages.[143] The district court followed *TVA*. It held that the claim was preempted by the Clean Air Act because "federal, state, and local authorities extensively regulate and comprehensively oversee the operations" of the power plant and that the "claims impermissibly encroach on and interfere with that regulatory scheme."[144]

The U.S. Court of Appeals for the Third Circuit disagreed.[145] It determined that the Clean Air Act did not prohibit a state from adopting pollution control standards "more stringent than those specified by the federal requirements."[146] The power plant appealed to the Supreme Court, which denied review.[147] In May 2015, the district judge dismissed the case after the lead plaintiffs reportedly failed to establish that the power plant damaged anyone's property and did not respond to court orders.[148] Thus, it remains unclear how a court could determine an appropriate remedy for these claims without interfering with the federal regulatory regime.

An Iowa lawsuit also failed to provide these answers. In *Freeman v. Grain Processing Corp.*, property owners did not pursue a power plant, but rather a grain processing plant.[149] The Supreme Court of Iowa allowed the case to proceed, reasoning that merely bringing public and private nuisance claims for the effects of a local operation did not in themselves conflict with the Clean Air Act. It put off, however, a determination of whether the remedy in response to the claim would be preempted. "We simply cannot evaluate the lawfulness of injunctive relief that has not yet been entered. Such an evaluation must await the development of a full record and the shaping of any injunctive relief by the district court."[150] The court did not provide any guidance as to what remedy may be available to the courts that

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141 Bell v. Cheswick Generating Station, 903 F. Supp. 2d 314, 315 (W.D. Pa. 2012), *rev'd*, 734 F. 3d 188 (3rd Cir. 2013), *cert. denied*, 134 S. Ct. 2696 (2014).

142 *See id.* at 315-16.

143 *See id.*

144 *See id.* at 318-19.

145 Bell v. Cheswick Generating Station, 734 F. 3d 188 (3rd Cir. 2013), *cert. denied*, 134 S. Ct. 2696 (2014).

146 *Id.* at 190, 198.

147 Bell v. Cheswick Generating Station, 134 S. Ct. 2696 (2014).

148 *See* Brian Bowling, *Suit vs. Cheswick Power Plan Dropped*, PITTSBURGH TRIBUNE REVIEW (May 11, 2015).

149 *See* Freeman v. Grain Processing Corp., 848 N.W.2d 58 (Iowa 2014).

150 *Id.* at 85.

would not improperly encroach on the Clean Air Act and its detailed permitting system.

Another problem with these lawsuits is that, if allowed, plants would have no notice as to which levels of emissions could lead to liability. EPA permits would allow certain emissions, but the plants could be subject to liability even if operating in compliance with those permits. In *TVA*, the Fourth Circuit pointedly explained that "no matter how well-meaning, [a plant] would be simply unable to determine its obligations."[151] Judges from court to court and case to case could second-guess levels allowed under EPA permits and issue rulings that are entirely unpredictable and completely inconsistent with each other.

While this engine for litigation has not been foreclosed, it has stalled and should remain so in order to not interfere with Congress's careful management of America's natural resources.

IV. ENGINE NO. 3 – SUING THE GOVERNMENT TO REGULATE NATURAL RESOURCES

In addition to trying to change industry behavior through the threat of massive liability, environmentalists have also turned their litigation sights on the government. In these lawsuits, environmentalists sue government regulators to force them to change government standards or programs to advance the environmentalists' own private agendas. These efforts produced a major success in 2007 with *Massachusetts v. EPA* over the regulation of carbon dioxide.[152]

In *Massachusetts*, several state attorneys general and environmental groups sued EPA over the agency's 2003 denial to regulate CO_2 and other GHG emissions from motor vehicles.[153] The Supreme Court held that GHGs could be considered "pollutants" under the Clean Air Act definition section for the purpose of regulating emission in cars.[154] The Court con-

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151 North Carolina ex rel. Cooper , 615 F.3d at 306.

152 Massachusetts v. EPA, 549 U.S. 497, 505 (2007).

153 Petitioners included twelve states, local governments, and trade associations. *See id*. at 505, n. 2. The action included many private organizations, such as the Center for Biological Diversity, Center for Food Safety, Conservation Law Foundation, Environmental Advocates, Environmental Defense, Friends of the Earth, Greenpeace, International Center for Technology Assessment, National Environmental Trust, Natural Resources Defense Council, Sierra Club, Union of Concerned Scientists, and U.S. Public Interest Research Group. *See id*. at 505, n. 3-4.

154 *See id*. (stating that the questions before the Court included "whether EPA has the statutory authority to regulate greenhouse gas emissions from new motor vehicles; and if so, whether its stated reasons for refusing to do so are consistent with the statute"); *see also* 42 U.S.C. § 7521(a)(1) (2006). Section 202(a)(1) of the CAA provides the EPA Administrator with authority to:

[P]rescribe (and from time to time revise) in accordance with the provisions of this section, standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new cluded, therefore, that "EPA has the statutory authority to regulate the emission of such gases from new motor vehicles."[155] Pursuant to this ruling, EPA issued an Endangerment Rule and new Corporate Average Fuel Economy (CAFE) standards to reduce GHG emissions from cars.[156] The Court did not address how that ruling would pervade the Clean Air Act's other programs, such as the NAAQS that were designed to address traditional pollutants. This ruling has sparked heated debate as to the extent Congress authorized EPA to regulate GHGs and whether EPA has overreached its authority in extending this ruling to other EPA programs.[157]

Massachusetts also has empowered environmentalists to find other methods for suing government officials. Two prominent agenda-driven efforts related to natural resources are "sue and settle" actions, where environmentalists seek to have EPA impose new legal obligations outside of the normal regulatory process,[158] and "public trust" claims, which are intended to circumvent Congress on climate change policy.

A. *The Rise of "Sue and Settle" Regulations*

"Sue and settle" is the term given to certain lawsuits brought by advocacy groups to challenge an agency action or rule. In settling the case, the agency agrees to effectively adopt the advocacy group's position. The suit and the consent decree enforcing the settlement are all done outside of the safeguards of the Administrative Procedure Act (APA) rulemaking, without

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motor vehicle engines, which in his judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare. *Id.*

155 *Massachusetts*, 549 U.S. at 532; *see also* Envtl. Def. v. Duke Energy Corp., 549 U.S. 561, 570–71 (2007) (concerning whether an energy company violated the Clean Water Act when it modified its coal power plants without first obtaining a permit); Nw. Envtl. Def. Ctr. v. Owens Corning Corp., 434 F. Supp. 2d 957, 959–60 (D. Or. 2006) (alleging a violation of the CAA for constructing a GHG-producing facility without a permit); James L. Arnone et al., *Global Climate Change Litigation*, *in* ENVIRONMENTAL LITIGATION: LAW AND STRATEGY 11–12 (Cary R. Perlman ed., 2009) (stating that the CAA empowers EPA to set National Ambient Air Quality Standards (NAAQS) to protect public health and the environment).

156 Endangerment Rule, 74 Fed. Reg. 66496 (Dec. 15, 2009); Auto Rule, 75 Fed. Reg. 25324 (May 7, 2010).

157 *See, e.g.,* Utility Air Regulatory Group v. E.P.A, 134 S. Ct. 2427 (2014).

158 *See Sue and Settle: Regulating Behind Closed Doors*, U.S. CHAMBER OF COMMERCE (May 2014), at 3, http://www.uschamber.com/report/sue-and-settle-regulating-behind-closed-doors [hereinafter *Regulating Behind Closed Doors*]. Commentators have described "sue and settle" as follows: "In this situation, 'arrangements' are made for an entity to institute a legal action to achieve a desired outcome. The 'government' makes the decision to settle the case and thereby effects a change in policy—well below the radar of public accountability. If political flack does ensue, the answer is something akin to 'the devil (i.e., the courts) made me do it.'" Jack W. Thomas & Alex Sienkiewicz, *The Relationship Between Science and Democracy: Public Land Policies, Regulation and Management*, 26 PUB. LAND & RESOURCES L. REV. 39, 63–64 (2005).

Office of Management and Budget (OMB) oversight, and absent any input from other stakeholders.[159]

The sue-and-settle process is not unique to EPA, but reports suggest that the use of such agreements by EPA has increased in recent years.[160] In 2014, the U.S. Chamber of Commerce found that more than a hundred EPA rules, resulting in billions in annual compliance costs, were the product of sue-and-settle agreements.[161] In about sixty cases between 2009 and 2014, EPA did not defend itself in the lawsuits, leading some to call these actions "friendship suits" that were purposefully designed to allow EPA to regulate outside of the scrutiny of Congress, state officials, the regulated industry and the public at large.[162] For example, environmentalists sue EPA to start or advance a rulemaking or enforce a statutory deadline and EPA willingly agrees to a "settlement" to do just that.[163] Because these settlements are enforced through court order, they have the same effect at law, both in getting EPA to act and in governing industry.

One check on this system is to allow trade groups or other interested parties to intervene in the cases so they can assert their rights to be heard should a consent decree result in new regulations affecting their interests.[164] In 2013, such an intervenor successfully challenged a sue-and-settle arrangement to the U.S. Court of Appeals for the Ninth Circuit.[165] This case, *Conservation Northwest v. Sherman*, involved an agreement between environmental groups and the Bureau of Land Management to alter the method of assessing the impact of logging on wildlife as part of the Northwest Forest Plan.[166]

The Northwest Forest Plan was formed in the 1990s to balance conservation of the Pacific Northwest forests with commercial logging.[167] The decree set aside that compromise and required changes the environmentalists sought to species classifications and several new management require-

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159 *See* Pub. L. No. 79–404, 60 Stat. 237 (1946); Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (Sept. 30, 1993); Exec. Order No. 13,132, 64 Fed. Reg. 43,255 (Aug. 4, 1999); Exec. Order No. 13,211, 66 Fed. Reg. 28,355 (May 18, 2001); Exec. Order No. 13,563, 76 Fed. Reg. 3,821 (Jan. 18, 2011).

160 *See Regulating Behind Closed Doors*, *supra* note 158, at 14.

161 *Id.* at 14-15.

162 *See id.*; *see also* Victor E. Schwartz, Phil Goldberg & Christopher E. Appel, *Appeals Court Rebuffs Federal Agency's Attempt at Sue and Settle Regulation*, 22 Legal Opinion Letter (Wash. Legal Found., Washington, D.C.), July 19, 2013, at 1.

163 *See id.*

164 Some courts have allowed intervention, while others have found that the would-be intervenors lack judicial standing to participate in the cases, which has perpetuated this practice. *See, e.g.,* Defenders of Wildlife v. Jackson, 284 F.R.D. 1 (D.D.C. 2012); Center for Biologic Diversity v. EPA, No. C-11-06059, 2012 WL 909831 (N.D. Cal. Mar. 16, 2012); Center for Biologic Diversity v. EPA, 274 F.R.D. 305 (D.D.C. 2011).

165 Conservation Northwest v. Sherman, 715 F.3d 1181, 1181 (9th Cir. 2013).

166 *See id.* at 1184-85.

167 *See id.* at 1183-84.

ments for species that had never been part of the Plan.[168] The district court approved the consent decree, stating that these provisions were to take effect absent any "public-participation procedures."[169] The court reasoned that "because the consent decree was a 'judicial act,' procedural requirements that would otherwise govern agency action [were] inapplicable."[170]

The lumber company that intervened in the case appealed the decision. The Ninth Circuit reversed, concluding the agency effectively promulgated "a substantial and permanent amendment" to an existing regulation without following statutory notice-and-comment rulemaking procedures.[171] The court held that it was "indisputable that the Agencies would have had to go through formal procedures if they had sought to implement the changes to [the Northwest Forest Plan] contained in the consent decree on their own."[172] Therefore, "the public should have been afforded an opportunity to comment on all alternatives that the Agencies were required by law to consider."[173] This case helped prompt heightened scrutiny over sue-and-settle practices, including congressional hearings and potential legislative reforms.[174] In response, EPA has begun posting on its website Notices of Intent to Sue (i.e. notices of potential "sue and settle" actions) filed by private plaintiffs against the agency.[175]

An additional wrinkle in these cases is that several federal statutes, including the Equal Access to Justice Act (EAJA), can require the government to pay the attorney fees of the interest groups that sue the agencies.[176] Many environmental groups have collected such funds when suing EPA, either under sue-and-settle arrangements or otherwise.[177] It has been esti-

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168 *See id.* at 1187.

169 *Id.* at 1185.

170 *Id.*

171 *Id.* at 1188.

172 *Id.* at 1187-88.

173 *Id.*

174 *See, e.g.*, Sunshine for Regulatory Decrees and Settlements Act of 2015, H.R. 712, 114th Cong. (2015); Achieving Less Excess in Regulation and Requiring Transparency Act of 2014, H.R. 2804, 113th Cong. (2014); *see also Hearing on Sunshine for Regulatory Decrees and Settlements Act*: *Hearing on H.R. 1493 Before the H. Judiciary Subcomm. on Regulatory Reform, Commercial and Antitrust Law*, 113th Cong. (2013); Judgment Fund Transparency Act of 2013, H.R. 317, 113th Cong. 2 (2013); Open Book on Equal Access to Justice Act, H.R. 2919, 113th Cong. (2013).

175 *See Notices of Intent to Sue the U.S. Environmental Protection Agency (EPA)*, EPA, http://www.epa.gov/ogc/noi.html.

176 See 5 U.S.C. § 504; 28 U.S.C. § 2412; see also David A. Root, Attorney Fee-Shifting in America: Comparing, Contrasting, and Combining the "American Rule" and the "English Rule," 15 IND. INT'L & COMP. L. REV. 583, 588 (2005) (stating that there are over 200 federal laws providing for attorney fee shifting).

177 *See* House Rep. 112-594, Government Litigation Savings Act, 112th Cong. (2012); *Hearing on Government Litigation Savings Act*, House Judiciary Subcommittee on Courts, Commercial and Administrative Law, 112th Cong. (2011) (statement of Professor Jeffrey Axelrad), *available at* 2011 WLNR 24783754.

mated that thousands of such claims are filed each year by advocacy groups, which can help fund the group along with forcing the federal agencies to direct resources to the group's agenda.[178]

B. *"Public Trust Doctrine" to Force the Regulation of GHG Emissions*

In the wake of *AEP v. Connecticut* and other failed global climate change tort cases, a group called "Our Children's Trust" coordinated a number of lawsuits against state and federal regulators in an effort to force them to regulate GHG emissions under a common law theory called the "public trust doctrine."[179] The group claimed that these regulators have independent "public trust" obligations to protect the atmosphere and communal property under their control from global climate changes.[180] They sought judicial injunctions to limit total GHG emissions worldwide to 350 parts per million and then force federal and state governments to impose comprehensive regulatory regimes based on this standard.

Since 2011, such lawsuits have been filed in at least a dozen states, and petitions for rulemakings have been submitted to state regulatory agencies in each of the other states.[181] A federal lawsuit was also filed.[182] Thus far, none of the plaintiffs have prevailed in the courtroom,[183] as most of the lawsuits have been dismissed for failure to state a claim, non-justiciability, or lack of standing.[184] As of this writing, a few lawsuits remain pending.[185]

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178 *See id.*; *see also* Phil Taylor, *Lawsuit Abuse Charge by Western Lawmakers Enrages Enviro Groups*, N.Y. TIMES (Nov. 19, 2009), http://www.nytimes.com/gwire/2009/11/19/19greenwire-lawsuit-abuse-charge-by-western-lawmakers-enra-54944.html.

179 *See* Victor E. Schwartz, Phil Goldberg & Christopher E. Appel, *Lawsuit Roulette: Pursuit of the "Children's Trust" Climate Change Litigation*, 26:15 Legal Opinion Letter (Wash. Legal Found. July 8, 2011); *see also* Joseph Sax, *The Public Trust Doctrine in Natural Resources Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970) (discussing early development of the public trust doctrine); Allen Kanner, *The Public Trust Doctrine, Parens Patriae, and the Attorney General as the Guardian of the State's Natural Resources*, 16 DUKE ENVTL. L. & POL'Y F. 57, 71-72 (2005)

180 *See, e.g.,* Am. Compl. for Dec. and Injunc. Relief, Sanders-Reed v. Martinez, Case No. D-101-CV-2011-01514 (N.M. Dist. Ct.-Santa Fe Cty. Feb. 16, 2012), *available at* http://ourchildrenstrust.org/-sites/default/files/New_Mexico_Amended%20Complaint.pdf; Amended Complaint for Declaratory and Equitable Relief, Chernaik v. Kitzhaber, Case No. 16-11-09273 (Or. Cir. Ct.-Lane Cty. May 19, 2011), *available at* http://ourchildrenstrust.org/sites/default/files/OregonAmendedComplaint.pdf.

181 *See Alphabetical List of State Legal Actions*, OUR CHILDREN'S TRUST, http://ourchildrenstrust.org/US/StateSummaryAlphabetical.

182 *See Federal Lawsuit Legal Updates*, OUR CHILDREN'S TRUST, http://ourchildrenstrust.org/US/Federal-Lawsuit.

183 *See US Legal Actions*, OUR CHILDREN'S TRUST, http://ourchildrenstrust.org/legal/US-Action.

184 *See, e.g.,* Kanuk ex rel. Kanuk v. Dept. of Natural Resources, 335 P.3d 1088 (Alaska 2014) (affirming trial court dismissal on non-justiciable political question grounds); Butler ex rel. Peshlakai v. Brewer, 2013 WL 1091209 (Ariz. Ct. App. May 14, 2013) (affirming trial court dismissal for failure to state a claim and on standing grounds); Aronow v. State, 2012 WL 4476642 (Minn. Ct. App. Oct. 1, 2012) (affirming trial court dismissal for failure to state a claim).

In 2014, the U.S. Court of Appeals for the D.C. Circuit dismissed the "public trust" case before it without even holding a hearing.[186] The court found that no such public trust cause of action exists in federal law: "plaintiffs point to no case . . . standing for the proposition that the public trust doctrine – or claims based upon violations of that doctrine – arise under the Constitution or laws of the United States."[187] State cases have met the same result. In Alaska, the state Supreme Court said that in addition to being legally deficient, the claims were ill-conceived: "Although declaring the atmosphere to be subject to the public trust doctrine could serve to clarify the legal relations at issue, it would certainly not 'settle' them. It would have no immediate impact on greenhouse gas emissions in Alaska, it would not compel the State to take any particular action, nor would it protect the plaintiffs from the injuries they allege."[188]

The public trust doctrine, to the extent it has been established, is not suited for this type of action. Traditionally, it has been applied only in a narrow set of cases involving state-owned water rights as a basis to prevent states from selling public property along waterways to private interests.[189] For example, in *Illinois Central. Railroad. Company. v. Illinois*, the Supreme Court of the United States found that the shoreline of Lake Michigan was held in public trust by the state and, therefore, could not be transferred out of public ownership to a private railroad.[190] In these cases, the remedies are straightforward, the ownership interest is decided, and the states are generally informed as to whether they can sell, lease, or license the lands. Indeed, the public trust doctrine can be important for determining land and water rights and provide a safeguard against states seeking to sell, lease, or license valuable public property to raise short-term capital. But, it is not a doctrine that can force federal and state regulation of GHG emissions.

If applied as attempted here, interest groups would be able to turn the public trust doctrine into a cause of action for imposing their own natural resource agendas whenever they believe the government is not doing enough to satisfy their subjective beliefs. For example, even when Congress has a law on point, such as with the Clean Air Act, Endangered Species Act, or Clean Water Act, anyone could bring a constitutional public trust claim that the government is not doing enough to preserve the air, species, or water for future generations. Therefore, in addition to providing endless opportunities for new natural resource litigation, this theory could dismantle Congress's decades-long management of America's natural resources.

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185 *See States with Lawsuits*, OUR CHILDREN'S TRUST, http://ourchildrenstrust.org/LawsuitStates.

186 *See* Alec L. v. Gina McCarthy, No. 13-5192 (D.C. Cir. June 5, 2014) (unpublished).

187 *Id.*

188 *Kanuk*, 335 P.3d at 1102.

189 *See supra* note 179.

190 *Illinois Cent. R.R. v. Illinois*, 146 U.S. 387 (1892).

CONCLUSION: THE EXTRACTION AND USE OF NATURAL RESOURCES SHOULD REMAIN A GOVERNANCE ISSUE FOR LEGISLATURES, NOT COURTS

Attempts to impose liability against private and public entities related to the extraction and use of natural resources create clear conflicts with Congress's carefully developed statutory and regulatory regimes to manage natural resource risks. Starting in the 19th century, Congress erected a comprehensive framework of federal laws designed to balance the continued commercial development of the country's natural resources with other societal interests, including worker safety, public welfare, affordability, and conservation.[191] By-and-large, this approach has worked. The United States has one of the most advanced economies and among the strongest environmental and worker safety standards in the world. The use of the country's natural resources also has led to comparably high living and public health standards.[192]

Were courts to expand theories related to products liability, public nuisance, or other common law claims to address risks associated with natural resources, they would effectively be regulating how these resources can be extracted and used. As judges with both liberal and conservative views have recognized, courts do not have the tools to do this job. The civil justice system is designed to compensate people who have been wrongfully injured by another's conduct.[193] It should not be used to supplant the administrative and legislative branches of government.[194] Former U.S. Secretary of Labor Robert Reich has explained that such "regulation through litigation" improperly invades Congress's careful determinations about whether to regulate certain activity or conduct, and, if so, by how much. While Secretary Reich initially favored such agenda-driven litigation, he quickly realized that the suits were "faux legislation, which sacrifices democracy."[195]

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191 *See supra* Part I.

192 *See id.*

193 *See* DAN B. DOBBS, THE LAW OF TORTS § 9, at 14 (2000) (characterizing the principal goal of tort law as "righting wrong").

194 *See* Donald G. Gifford, *Impersonating the Legislature: State Attorneys General and Parens Patriae Product Litigation*, 49 B.C. L. REV. 913, 914 (2008); *see also* ANDREW P. MORRISS, BRUCE YANDLE & ANDREW DORCHAK, REGULATION BY LITIGATION 1 (2009); DANIEL P. KESSLER, Introduction, in REGULATION VERSUS LITIGATION: PERSPECTIVES FROM ECONOMICS AND LAW 3 (Daniel P. Kessler ed., 2011).

195 Robert B. Reich, *Don't Democrats Believe in Democracy?*, WALL ST. J., Jan. 12, 2000, at A22; *see also* Mark A. Behrens & Rochelle M. Tedesco, *Addressing Regulation Through Litigation: Some Solutions to Government Sponsored Lawsuits*, 3 ENGAGE 109, 109 (2002); Victor E. Schwartz & Leah Lorber, *State Farm v. Avery: State Court Regulation Through Litigation Has Gone Too Far*, 33 CONN. L. REV. 1215, 1215 (2001).

It is certainly understandable that advocates on any side of a debate can become frustrated that their views are not adopted by Congress, the President, or federal and state regulators. Political frustrations, however, are not the proper basis for litigation seeking to impose those viewpoints on the American people. Interest groups on either side of the aisle should not be able to use the courts to hijack the political process and relegate the government to be managers of their national policy directives. Members of Congress and the many stakeholders involved would be silenced by judicial decree. This is not the American system of governance.

JUSTICE STEVENS AND SECURITIES LAW

Lyman Johnson[**] *& Jason A. Cantone*[+]

INTRODUCTION

Former Supreme Court Justice John Paul Stevens is famous for many things. A decorated World War II veteran, he is the final Justice to have served in that war. He is the only Supreme Court Justice appointed by a President (Gerald Ford) not elected by the American people, and he may well prove to be the last Justice confirmed by a unanimous Senate vote.[1] On the highest bench, where he served longer than any justice except William Douglas and Stephen Field, he was known as much for his 720 dissents as for the 377 opinions he authored for the Court.[2] Fierce independence is the most notable of his personality traits,[3] so much so that his 2010 biographers subtitled their work *An Independent Life*. This "maverick streak"[4] was thought by some to be so pronounced as to impede collegial consensus building around his views.[5] Others recall Stevens's important work in antitrust law, his altered views on the death penalty,[6] or his posi-

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+ The views expressed in this article represent those of the authors alone. Dr. Cantone's research was conducted outside of his employment, based on a data set created before his current employment, and relied entirely on information available from public sources.

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1 *See generally* BILL BARNHART & GENE SCHLICKMAN, JOHN PAUL STEVENS: AN INDEPENDENT LIFE (2010).

2 *See Supreme Court Sluggers: John Paul Stevens, The Numbers (As of October 3, 2010)*, GREENBAG.ORG, http://www.greenbag.org/sluggers/sluggers/Stevens2010/updates/Stevens%20update%20through%20OT2009.jpg (last visited July 10, 2014).

3 *See* BARNHART & SCHLICKMAN, *supra* note 1, at 256.

4 *See id.* at 254.

5 For example, in *Bush v. Gore,* 531 U.S. 98 (2000), four justices authored separate dissents, with the senior dissenter, Stevens, unable to obtain a unified dissenting opinion; *See* BARNHART & SCHLICKMAN, *supra* note 1, at 256-60.

6 *See generally* Nina Totenberg, *Justice Stevens: An Open Mind On a Changed Court*, NPR (Dec. 19, 2010, 3:50 PM), http://www.npr.org/templates/story/story.php?storyId=130198344; Adam Liptak, *Ex Justice Criticizes Death Penalty*, N.Y. Times (Dec. 19, 2013), http://www.nytimes.com/2010/11/28/u

tions on the many contentious issues addressed by the Court during Stevens's remarkable thirty-four-and-a-half years of service.[7] And of course, his lengthy 2010 dissent in the high profile case of *Citizens United v. Federal Election Committee*[8] and his provocative 2014 book proposing several constitutional changes have drawn wide attention.[9]

But one thing Justice Stevens is not renowned for is his role in the securities law jurisprudence of the Supreme Court. Beyond the usual journal articles that address his views on discrete issues,[10] only two short pieces written in the mid-1990s even take up the former Justice's securities law views,[11] and they do so quite selectively, without addressing the last half of his tenure. Strikingly, neither a 440-page law review tribute to Stevens nor any of his biographies,[12] including that written by Stevens himself,[13] give this subject any sustained attention.

This is both odd and an unfortunate neglect of Justice Stevens's legacy in this area of law. Justice Stevens authored more securities law opinions than any justice in the history of the Supreme Court.[14] He surpassed even Justices Lewis Powell and Harry Blackmun in overall production.[15] True to

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s/28memo.html. Michael C. Dorf, *Becoming Justice Stevens: How and Why Justices Evolve*, FindLaw (Dec. 20, 2013, 4:10 PM), http://writ.lp.findlaw.com/dorf/20100421.html.

7 *Members of the Supreme Court of the United States*, SUP. CT. OF THE U.S., http://www.supremecourt.gov/about/members.pdf (last visited July 10, 2014); *List of Justices of the Supreme Court by Time in Office*, WIKIPEDIA, http://en.wikipedia.org/wiki/List_of_Justices_of_the_Supreme_Court_of_the_United_States_by_time_in_office (last visited July 10, 2014).

8 558 U.S. 310 (2010) (Stevens, J., concurring and dissenting, in part).

9 JOHN PAUL STEVENS, SIX AMENDMENTS: HOW AND WHY WE SHOULD CHANGE THE CONSTITUTION (2014).

10 *See, e.g.*, Zachary D. Clopton, *Bowman Lives: The Extraterritorial Application of U.S. Criminal Law After Morrison v. National Australia Bank*, 67 N.Y.U. ANN. SURV. AM. L. 137, 178-180 (2011); David L. Franklin, *What Kind of Business-Friendly Court? Explaining the Chamber of Commerce's Success at the Roberts Court,* 49 SANTA CLARA L. REV. 1019, 1035 (2009). Numerous articles discuss various positions of Stevens in particular cases, just as numerous articles do so for each Justice on most subjects.

11 *See generally* Douglas M. Branson, *Prairie Populist? The Business and Securities Law Opinions of Justice John Paul Stevens,* 27 RUTGERS L.J. 605 (1996); Karl S. Okamoto, *Desperately Seeking a Stevens [Who Cares About the Federal Securities Laws]*, 27 RUTGERS L.J. 627 (1996). Each of these short articles seeks to distill from, and comment on, a judicial outlook based on a handful of Justice Stevens's securities opinions up to 1994, sixteen years before Stevens retired. The two pieces do not address Stevens's enormous overall output in the area.

12 *Symposium: The Legacy of Justice Stevens*, 106 NW. U. L. REV. 409-850 (2012); BARNHART & SCHLICKMAN, *supra* note 1. A full-text search of these publications was conducted in Google Scholar and Google Books, respectively.

13 John Paul Stevens, FIVE CHIEFS (2011). The word "securities" does not appear in this book or in the book described in *supra* note 1. The methodology described in note 12 was also used here. Justice Stevens's 2014 book—SIX AMENDMENTS: HOW AND WHY WE SHOULD CHANGE THE CONSTITUTION—does not address securities law at all.

14 *See infra* Part III.

15 *Id.*

form as a "maverick,"[16] Stevens dissented frequently.[17] Yet, unlike other famed dissenters−such as Douglas, Brennan, and Marshall[18]−when Stevens dissented in a securities case, he almost always wrote an opinion stating why.[19] In fact, he wrote more dissenting opinions in the securities area than any other Justice.[20] And even when he agreed with a majority of the Court, he frequently wrote a separate concurring opinion. Thus, he wrote more concurring opinions in securities law cases than any other Justice.[21] With his unmistakable record of authoring the most total opinions, the most concurring opinions, and the most dissenting opinions, it is puzzling that Stevens's role in securities law has been ignored.

In this Article, we tell the overlooked story of Justice Stevens's important role in Supreme Court securities law decisions. In Part I, where we briefly highlight Stevens's career before his 1975 appointment to the Supreme Court, we observe that we can identify no evident interest in or connection to federal securities law or the securities industry, making his contributions all the more remarkable. The only foreshadowing of his prolific opinion-writing on the subject of securities law was his voluminous writing of opinions, in general, while serving on the Seventh Circuit Court of Appeals. This commitment to authoring opinions stemmed, in turn, from Stevens's unforgettable experience as general counsel to a special commission that investigated bribery on the Illinois Supreme Court in the late 1960s, as Part I relates.

Part II describes our data set and methodology. Part III then empirically assesses Justice Stevens's role in securities law from several quantitative vantage points. These include the sheer volume of his securities opinion production, in relation to other Supreme Court justices, focusing on the 40-year period (1971-2010) encompassing Justice Stevens's years of service but also reaching all the way back to the passage of the federal securities laws in the early 1930s; the parties and issues involved in, and the outcomes of, his rulings; and the alignment of justices when Stevens wrote his various types of securities opinions. Part IV examines whether Justice Stevens advanced a discernible judicial philosophy in his securities law opinions, concluding that, eventually, he assuredly did. He was very mindful of the Court's altered views on the federal securities laws, as initially championed by Justice Powell but continuing well beyond Powell's tenure, and Stevens largely disagreed with that shift, believing the Court had not only

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16 *See supra* note 4.

17 *See infra* Part III.

18 *Id.*

19 *Id.*

20 *Id.* Stevens did not dissent only in securities law cases. He dissented across a wide range of subjects. His 720 dissenting opinions on the Supreme Court far outpace the 486 of the second most active writer, Justice William Douglas. *See supra* note 2.

21 *See infra* Part III.

sharply veered course but had repeatedly failed to adhere to Congress' intent, both original and as re-enacted. He wrote not simply to express opposition, however, but also to preserve what, in his eyes, he saw as fidelity to legislative intent, his consistent reference point. As we observe in Part IV, Chief Justice Roberts recently made legislative intent the centerpiece of his analysis in an important securities case. This then is not inherently a "liberal" or "conservative" judicial approach to securities law. Importantly, Stevens's belief in preserving a minority view for future reference reflects the enduring influence of Justice Rutledge, for whom Stevens clerked, who wrote a dissent in 1948 that Stevens cited in an opinion he authored for the Court in 2004. This formative clerkship experience, then, not a career path or interest in securities law as such, helps explain Justice Stevens' prolific opinion writing, in securities law and more generally. We close with a brief Conclusion.

I. JUSTICE STEVENS AND SECURITIES LAW PRIOR TO THE SUPREME COURT

Justice Stevens's remarkable production of Supreme Court securities law opinions invites the search for an explanation. As with all biographic efforts, we turn to his pre-Court days to aid in our quest. Given that Stevens went on the Court at age 55, he had had several decades of a rich professional life before assuming the role of Supreme Court justice. As we examine his life for clues to his prolific securities law jurisprudence, we are struck by two facts that we briefly touch on in this Part. First, sketching the outlines of his life in subpart "A" below, we see what might be called, to paraphrase Sherlock Holmes's famous remark about the dog that did not bark, the "curious incident" of the securities law jurist who "did nothing" in that area beforehand.[22] That is, the author of more securities law opinions than any other Supreme Court justice in history displayed no particular connection to or interest in securities law before going on the bench. His biography is intriguing for precisely this reason. The key to his inordinate productivity, it turns out, lies entirely outside the securities area.

Second, Stevens's five-year service on the Seventh Circuit Court of Appeals offers a different clue to his later writing. There, as described in subpart "B" below, Stevens wrote a staggering number of opinions. When he went on the Supreme Court to serve during a dramatic upsurge in that court's caseload in the securities area,[23] it was to be expected that he would

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22 ARTHUR CONAN DOYLE, *Silver Blaze*, in THE MEMOIRS OF SHERLOCK HOLMES 346-47 (1893) (Doubleday).

23 *See* Adam C. Pritchard, *Justice Lewis F. Powell, Jr. and the Counterrevolution in the Federal Securities Laws*, 52 DUKE L.J. 841, 858 (2002).

continue to speak his mind–as he did–with or without any prior securities law experience.

A. *No Earlier Evident Interest in Securities Law*

Stevens was born in Chicago on April 20, 1920, the youngest of four boys. He once told an interviewer that he "had a very happy childhood."[24] His family was wealthy and politically conservative. Stevens's grandfather and great uncle founded the Illinois Life Insurance Company, and his grandfather and father built the lavish Stevens Hotel (now the Chicago Hilton and Towers), the largest hotel in the world when it opened in 1927.[25]

The family suffered severe financial and personal misfortune, however. The downfall of the Stevens dynasty occurred in the depths of the Depression, eventually resulting in the loss of the family's hotels, a criminal conviction (later reversed) of Stevens's father, and his uncle's suicide. Despite these family reversals, Stevens attended the University of Chicago[26], where he excelled academically (being admitted to Phi Beta Kappa) and socially.[27] After earning his undergraduate degree, he entered graduate studies in literature at the same school.[28]

With U.S. participation in World War II looming, Stevens completed a Navy correspondence course in cryptography and applied for a commission on December 6, 1941, an uncanny one day before the attack on Pearl Harbor.[29] His nearly four years of work as a naval communication traffic analyst and cryptographer earned him the Bronze Star and the Legion of Merit.[30]

Returning to civilian life, Stevens did not resume his studies in literature, but enrolled in law school at Northwestern University.[31] It was in writing an unsigned comment on antitrust law for Northwestern's flagship law review that Stevens began a life-long interest in that area. After graduating first in his law school class, *magna cum laude*, Stevens began a Supreme Court clerkship with Justice Wiley Blount Rutledge, who had an abiding influence on Stevens' thinking.[32] In that 1947-1948 term the Court heard thirty-six civil rights and civil liberties cases. In Stevens' majority opinion in the 2004 case, *Rasul v. Bush*,[33] a landmark habeas corpus case

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24 Jeffrey Rosen, *The Dissenter: Justice John Paul Stevens*, N.Y. TIMES, Sept. 23, 2007, at F54.
25 *See* BARNHART & SCHLICKMAN, *supra* note 1, at 24-26.
26 *See id.* at 32-33.
27 *See id.* at 36-37.
28 *Id.* at 41-42.
29 *Id.* at 43.
30 *Id.* at 51.
31 *Id.* at 52.
32 *See id.* at 62.
33 542 U.S. 466 (2004).

involving terrorism detainees at the Guantanamo Bay Naval Station, he cited Justice Rutledge's 1948 dissent in *Ahrens v. Clark*,[34] although the dissent was not mentioned in any brief for the case. Stevens' thinking about the enduring power of a well-written dissent could not have been made clearer.

His clerkship ended, Stevens turned down an offer to teach at Yale Law School and, instead, he returned to Chicago and began practicing law.[35] He worked under antitrust specialist Edward R. Johnston, and the two wrote a 1949 law review article on monopoly enforcement, Stevens' second scholarly writing on the subject of antitrust law.[36]

In 1951, Stevens returned to Washington to take a position as staff lawyer to the House Judiciary Committee's Subcommittee on the Study of Monopoly Power.[37] It was through work on Judiciary Chairman Emanuel Celler's antitrust investigation of major league baseball that Stevens combined his abiding love of that sport—an ardent Cubs fan[38]—with his interests in antitrust law and the Commerce Clause.[39] After his brief stint in government service, Stevens again returned to Chicago to what seemed likely to be a career in antitrust law.[40]

Stevens's star rose in Illinois political circles in the late 1960s due to his work on the Greenberg Commission, which investigated alleged improprieties by two Illinois Supreme Court justices, and his work for the Chicago Bar Association in its investigation of Judge Julius J. Hoffman following the Chicago Seven trial. It is here that we find one key to Stevens's later prolific opinion writing. Serving as general counsel to the Greenberg Commission that investigated alleged bribery at the Illinois Supreme Court—which led to the resignation of two justices—Stevens learned that a third, innocent justice had originally written a dissent from the bribe-induced decision.[41] But this justice had decided not to publish it in the interest of maintaining collegiality.[42] This discovery made an indelible impact on Stevens, who thought the dissent should have been published to inform the public.[43] Decades later, he recalled the incident and explained

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34 335 U.S. 188 (1948).

35 *See* BARNHART & SCHLICKMAN, *supra* note 1, at 79-80.

36 *See id.* at 81-83.

37 *See id.* at 89.

38 *See* Rosen, *supra* note 24, at F54. When he was twelve years old, Stevens attended Game three of the 1932 World Series at Wrigley Field and he has the baseball hit by Babe Ruth in his famous "called shot" homerun.

39 *See* BARNHART & SCHLICKMAN, *supra* note 1, at 88-92.

40 *Id*. at 93.

41 Rosen *supra* note 24, at F55.

42 *Id.*

43 *Id.*

why he believes writing dissents is important, saying "I just feel I have an obligation to expose my views to the public."[44]

In February 1970, advisers to Senator Charles Percy, a University of Chicago classmate of Stevens, presented a list of names of those recommended to fill a Seventh Circuit judicial seat vacant since 1968. Though Stevens initially balked at going on the bench, President Nixon nominated Stevens to that court in September of 1970, and he was confirmed by the Senate by a vote of 98–0. While serving on the Seventh Circuit Court of Appeals, Stevens continued to show the civil liberties sympathies developed during his clerkship with Justice Rutledge. In summations of his work, however, commenters most often used such restrained terms as "moderate," "centrist," "balanced," "generally conservative" and "careful craftsmanship."[45]

B. *The Seventh Circuit; Prolific Writer of Opinions Generally*

Notwithstanding the lack of any obvious prior interest in or connection to securities law, one hint of his eventual role as a productive writer of securities opinions emerged while Stevens served on the Seventh Circuit Court of Appeals. During his tenure on that court—from 1970 through 1975—he participated in 542 decisions and authored a remarkable 289 opinions of various sorts.[46] Forty-seven of those cases dealt with securities law. Stevens wrote for the court in fourteen of these, dissented in five, and concurred in one.[47]

That inordinate productivity did not falter with Stevens's December 19, 1975 appointment to the Supreme Court. In just his first three terms, when he might be expected as a young justice to be cautiously feeling his way, Stevens wrote more opinions than any other justice. He authored an astonishing thirty-six opinions for the Court, thirty-five concurrences, and sixty-five dissents in that three year period. It was evident from the start that Stevens was going to state his views. This was to be expected in the antitrust area, his specialty in practice.[48] However, this productivity also carried over into the securities law area in both his Court of Appeals opinions and, as will be shown below, his Supreme Court opinions. This all came about with no obvious earlier personal or professional interest in it. Stevens's background was thus quite different than that of his colleague

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44 *Id.*

45 *See* BARNHART & SCHLICKMAN, *supra* note 1, at 167.

46 *See* BARNHART & SCHLICKMAN, *supra* note 1, at 167.

47 Derived from results of Westlaw Classic search: "United States Court of Appeals, Seventh Circuit" & DA (AFT 1969 & BEF 1976) & Stevens & securities.

48 During his service on the Supreme Court, Justice Stevens wrote 15 majority opinions, 6 concurring opinions, and 14 dissenting opinions in antitrust cases.

Justice Lewis Powell, who moved onto the bench from a very active securities and corporate law practice,[49] and of Justice William Douglas, whom Stevens succeeded.[50]

II. METHODOLOGY

The study's main objective is to analyze Justice Stevens's role in federal securities cases and to explore how his opinion output and views in this specific area compare to his colleagues, including Justice Powell. As described further below, the database used in this study was created by the authors to answer a variety of empirical questions about federal securities cases decided by the U.S. Supreme Court and was previously used in our exploration of how the addition of female justices to the U.S. Supreme Court affected securities law decisions.[51] This part outlines the variables we explored in our investigation of Justice Stevens's and his colleagues' decisions in securities cases. For the sake of clarity, we invite interested readers to review our prior work for discussion of the additional variables included in the database.[52]

A. *The Database*

The database includes eighty-six federal securities cases decided by the Supreme Court between October 1971 and June 2010. This period includes all securities cases decided by the Supreme Court during Justice Stevens's (1975-2010) and Justice Powell's (1972-1987) respective tenures.[53]

To identify cases that met our restrictions, we first searched the Westlaw Supreme Court Database for all cases decided by the Supreme Court between October 1971 and June 2010 that were coded as "Securities

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49 The story of Justice Powell's important role in modern securities law has been compellingly told by Professor Adam Pritchard. *See* Pritchard, *supra* note 23. For a study covering cases in securities law through 1984, *see* Alfred F. Conard, *Securities Regulation in the Burger Court*, 56 U. COL. L. REV. 183 (1985).

50 Douglas served on the Securities and Exchange Commission before being elevated to the Supreme Court by President Franklin D. Roosevelt in 1939. *See Justices, William O. Douglas*, OYEZ, http://www.oyez.org/justices/william_o_douglas (last visited Jan. 10, 2016).

51 Lyman Johnson, Michelle Harner & Jason A. Cantone, *Gender and Securities Law in the Supreme Court*, 33 WOMEN'S RTS. L. REP. 1, 11-14 (2011). The methodology section described herein is a focused, light revision of the methodology section in the 2011 article, the first to use the database.

52 *See generally id.* (previous work displays additional variables).

53 The original database sought cases between October 1971 and June 2010 to span a period beginning before the appointment of the first female justice through the date when the search was run (June 2010). For the purposes of this empirical examination, no additional cases needed to be added to this period of time.

Regulation" or included the Securities Act of 1933 (Securities Act), the Securities Exchange Act of 1934 (Exchange Act), or the Investment Company Act of 1940 in the case headnotes. We then searched the U.S. Supreme Court Database for all cases decided by the Court between October 1971 and June 2010 that were coded as "Securities Regulation." In this second search, we also reviewed other cases coded as "Economic Activity" cases to confirm the identification of all securities cases. We removed three cases because they did not involve securities law issues. Later, we received the benefit of gaining access to Professor Adam Pritchard's database of all Supreme Court securities decisions, against which we verified the accuracy of our database.

B. *Study Design*

As described in our earlier work, we devoted several months to creating, testing, and refining the coding scheme and codebook for the cases.[54] The original database included twenty primary variables for analysis, with multiple sub-variables to explore the role of justice gender in securities cases before the Supreme Court. The variables described the parties, history of the case, legal issues presented, the holding (what, for whom, and whether sanctions were involved), and the votes of the justices including whether any dissents or concurring opinions were written and, if so, by whom and joined by whom. For this study of Stevens, we created a new database, removing variables focused on gender and aspects not explored in the prior study, and used the original data to create new variables related to the justices in this study (e.g., whether Justice Stevens authored an opinion in the case).

Before starting the initial study, we performed rigorous inter-rater reliability checks between the five coders and did not stop multiple iterations of this process until we achieved at least 90% agreement on the coding of each variable (with almost all variables reaching an agreement of 100%). During the coding period, each coder worked independently on a subset of the cases. After brief cleaning of the data, we finalized the database.

In the time between the initial study and the current one, a new, independent coder examined each of the cases, searching for any errors. The authors resolved all identified discrepancies with the original database and the new coder's work. This inspection to the coding resulted in the removal of two cases that did not meet the subject matter requirements for this study. Thus, this study of Stevens's opinions examines eighty-six cases. There were also minor corrections and the addition of a new category for opinions that were partial concurrences and partial dissents.

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54 *See* Johnson et al., *supra* note 51, at appendix A (for a description of each variable and subvariable and available from authors upon request).

The following section includes our analyses of majority opinions, dissenting opinions, and concurring opinions authored or joined by Justice Stevens. We also compare his opinion production to certain of his fellow justices, and we examine whether there were any notable differences in the parties, legal issues presented, or outcomes in cases where Justice Stevens authored or joined the majority opinion, dissent, or a concurrence. The analyses provided below offer only a partial look at the possible uses of the rich database.[55] We anticipate future articles further exploring the data to better understand the ongoing evolution of federal securities law jurisprudence, the role of particular justices, and individual case factors such as the parties involved and the legal issues presented.

III. A NUMERICAL ANALYSIS OF JUSTICE STEVENS'S SECURITIES OPINIONS

A. *The Numbers*

During his tenure from 1975 to 2010, Justice Stevens wrote more securities law opinions—twenty-nine—than any other Justice in our 1971-2010 data set. In fact, he wrote more securities opinions than any justice in the entire history of the Supreme Court.[56] Given that Stevens participated in sixty-five securities cases, his twenty-nine opinions means he wrote in almost 45% of those cases. His extensive involvement in this type of case was approximately that of other long-serving justices such as Blackmun, White, Rehnquist, Marshall, and Brennan, who participated in, respectively, sixty-nine, sixty-six, sixty-six, sixty-six, and sixty-two securities law cases. Yet Stevens authored far more opinions than any of these justices. His output of twenty-nine opinions was significantly more than the twenty penned by Blackmun, and far surpassed the seventeen opinions of Justice Powell, the fourteen written by Brennan, the twelve by Marshall, the eleven authored by White, and the mere six of long-serving Justice, later Chief Justice, Rehnquist. Rehnquist, even as Chief Justice, took little interest in writing securities opinions even though, very early in his tenure, he authored the landmark decision in *Blue Chip Stamps v. Manor Drug Stores*.[57]

The breakdown of Stevens's opinions shows that he wrote seven majority opinions, eight concurrences, and fourteen dissenting opinions (including eleven dissents in whole and three opinions in which he dissented in part). With respect to majority opinions, he trailed only the reform-

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55 For a general overview of cases, see our earlier work. Johnson, et al., *supra* note 51.

56 This number includes majority opinions, dissents, concurring opinions, and opinions concurring in part and dissenting in part.

57 421 U.S. 723, 725-55 (1975). As noted in Part IV, *infra*, although Stevens did not participate in the *Blue Chip Stamps* case, he thought it was wrongly decided.

minded Powell,[58] who authored thirteen, and Marshall who wrote eight. Stevens wrote more majority opinions than Blackmun, who wrote six, and more than the five written by Justices White and Brennan and the four written by Rehnquist. Stevens's eight concurring opinions led all other justices, with even Powell trailing behind. Blackmun wrote seven concurrences, Brennan and Powell each wrote three, White wrote only one, and neither Marshall nor Rehnquist wrote any. Taking his majority and concurring opinions together, Stevens wrote an opinion on the prevailing side fifteen times, more often than any justice except Powell's sixteen such opinions.

It is with respect to dissenting opinions, however, that Stevens stands so stunningly apart. To begin with, Stevens dissented, in whole or in part, in seventeen of the sixty-five securities law cases he participated in. Only Brennan dissented in more, at twenty-one.[59] Marshall dissented in fourteen decisions, and Blackmun in twelve. Justice Douglas, whom Stevens succeeded on the bench in 1975, served only during the first four of the years in our forty-year data set, but he dissented in a remarkable eleven cases in that brief period, even though, prior to 1971 and quite surprisingly, he dissented only once in a securities case in over thirty-five years of service to that date. And, strikingly, six of the seven dissenting opinions authored by Douglas were also in that brief four-year period. The relatively small securities opinion production by Justice Douglas seems astonishing given that he was an expert in securities law and the longest serving justice of all time.[60] Still, it should be recalled that, prior to the decade of the 1970s, the Supreme Court decided relatively few securities cases,[61] a pattern it reverted to in the 1990s.[62] With specific respect to dissenting opinions, Stevens clearly continued that maverick, if late-appearing, attribute of his predecessor, Justice Douglas.

But Stevens did not simply dissent, though he has been termed the "Court's leading dissenter."[63] He wrote—and far more than other justices, even as the number of dissenting opinions issued by the Supreme Court

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58 *See* Pritchard, *supra* note 23.

59 Justice Brennan was appointed to the Supreme Court on October 15, 1956 and he served until July 20, 1990.

60 *See supra* note 50 ("William O. Douglas holds the record for the longest continuous service on the nation's most powerful Court: 36 years and 7 months."). Professors Adam Pritchard and Robert Thompson have noted that, notwithstanding Justice Douglas' many recusals due to his SEC service, he "was not an active participant in securities cases,… [and] most of his opinions show up in the last four years of his tenure,…" Adam Pritchard & Robert Thompson, *Securities Law and the New Deal Justices*, 95 VA. L. REV. 841, 917-919 (2009). They conclude that Justice Douglas "had little impact on the Court's securities jurisprudence for his entire career." Id. at 919.

61 *See* Pritchard, *supra* note 23, at 864. We thank Professor Adam Pritchard for making this point, a point confirmed by his data on all Supreme Court securities decisions.

62 *Id.*

63 Ward Farnsworth, *Realism, Pragmatism, and John Paul Stevens*, in REHNQUIST JUSTICE: UNDERSTANDING THE COURT DYNAMIC 157, 157 (Earl M. Maltz ed. 2003).

dramatically rose during the last half of the twentieth century.[64] As noted earlier,[65] Stevens wrote because he believed he had a duty to tell the public what he believed in deciding a case. In fact, he wrote an opinion in fourteen of the seventeen cases in which he dissented, a remarkable 82%. By way of contrast, Brennan, although dissenting in twenty-one cases, wrote only six dissenting opinions (27%), while Blackmun, who dissented in twelve cases, wrote seven dissenting opinions (58%), and White wrote five dissents and Marshall wrote four. Powell wrote only one dissenting opinion. Here too, Stevens continued Douglas's later tradition of not simply dissenting but stating why he did so.[66] During this transformative era in Supreme Court securities jurisprudence, Stevens, perhaps recalling Justice Rutledge's dissents from his clerkship days, almost invariably stated why he disagreed with the Court's direction.[67]

Of Stevens's fourteen dissenting opinions, eleven were dissents in whole, while three were dissents in part. Whenever he dissented in part, another Justice joined him. The sole justice joining him differed in each of the partial dissents; there was no uniform coalition. In ten of his eleven dissents in whole, he authored the only dissent and was joined by at least one justice in five of those opinions. Thus, in eight of the fourteen dissenting opinions, he wrote for others as well, while in six he spoke only for himself.

We note one other aspect of Stevens's remarkable securities law output, to provide greater perspective. The latter two decades of his Supreme Court tenure (1990-2010) corresponded with a dramatic decline in the number of securities cases decided by the Supreme Court. From 1971 to 1979, the Court decided thirty-six such cases, and from 1980 to 1989, it decided twenty-four cases. However, from 1990 to 1999, that number plummeted to twelve, and from 2000 to 2010, it was a mere fourteen. Moreover, startlingly, no securities decisions at all were handed down in the three-year stretch of 1998, 1999, and 2000, or in 2003. Professor Adam Pritchard has rightly observed that the caseload in the 1970s and 1980s was an upsurge from past practice and was largely attributable to the presence and influence of Justice Powell,[68] a former securities lawyer. After 1987, when Powell retired, there were far fewer securities cases for any justice to write in. Consequently, Stevens's production of twenty-nine opinions is, in that light, all the more remarkable. Notably, he wrote fourteen opinions—

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64 LEE EPSTEIN, JEFFREY A. SEGAL, HAROLD J. SPAETH & THOMAS G. WALKER, THE SUPREME COURT COMPENDIUM: DATA, DECISIONS, AND DEVELOPMENTS 250-55 (Lee Epstein et. al. trans. CQ Press 5th ed. 2012).

65 Rosen, *supra* note 24, at F55.

66 *See supra* notes 59-61 and accompanying text.

67 *See supra* notes 32-34 and accompanying text. We elaborate on Stevens' views in *infra* Part IV.

68 Pritchard, *supra* note 23, at 920.

more than half of the twenty-six cases decided during the two decades ending in 2010. And showing an unflagging interest and energy, just as he wrote a securities opinion in his very first year on the Supreme Court (1976), he wrote two in his final year (2010).[69]

B. *The Outcomes*

We here highlight—from a quantitative vantage point[70]—certain striking features of the securities opinions in which Justice Stevens wrote or participated. Specifically, we identify noteworthy aspects of his involvement based on the areas of legal issue, parties involved, the holding, and alignment of the justices. To provide helpful context, we report our findings on these areas for both the sixty-five securities cases in which Justice Stevens participated and the eighty-six securities cases during the forty-year period of 1971-2010, recalling that Stevens served from 1975-2010.

1. Legal Issue

Overall, the Securities Exchange Act of 1934 (Exchange Act) was at issue in 73% of all eighty-six securities cases decided over the 1971-2010 period. For our analysis, we differentiated cases where the Exchange Act was the only issue presented from cases where the Exchange Act was one of at least two issues presented. More than 53% of the securities cases in that period involved only the Exchange Act. In contrast, only 6% of the cases involved only the Securities Act of 1933 (Securities Act). An additional 13% of cases involved both the Exchange Act and the Securities Act. Combined, cases involving only the Exchange Act and cases involving both the Exchange Act and Securities Act comprised about two-thirds of the securities cases decided from 1971 to 2010.

Of the sixty-five securities cases in which Stevens took part, the Exchange Act was at issue in 71% of the cases. While this number is a bit lower than in the overall 1971-2010 period, the Exchange Act was at issue in 86% of the fourteen dissents that Stevens authored, including in all three of the cases where he authored an opinion concurring in part and dissenting in part. When that statute was involved during his tenure and he disagreed with the Court, Stevens almost always wrote.

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69 Merck & Co. v. Reynolds, 559 U.S. 633, 655 (2010) (Stevens, J., concurring); Morrison v. National Australia Bank Ltd., 561 U.S. 247, 274 (2010) (Stevens, J., concurring); Radzanower v. Touche Ross & Co., 426 U.S. 148, 158 (1976) (Stevens, J., dissenting). In *Morrison*, although Stevens concurred in the result, he stated that he "dissents" yet again from the Court's "continuing campaign to render the private cause of action under § 10(b) toothless." 561 U.S. at 286.

70 Part IV *infra* provides a more qualitative assessment of Justice Stevens' views in the securities opinions he authored.

2. Parties

The government was the lead Petitioner in 14% of all cases over the forty-year period and in 11% of cases when Stevens took part in the decision. This increased slightly to almost 16% of the cases when Stevens was in the majority, but not the majority opinion author. However, when Stevens wrote the majority opinion, the government was the lead Petitioner in 29% of the cases, about two and half times the frequency of the government's position in that role in cases in which Stevens took part in the decision. Interestingly, in every case when the government was the lead Petitioner during the forty-year period, Stevens either wrote the majority opinion, was in the majority but not the author, or took no part in the decision. Stevens never wrote or took part in a dissent or concurrence in a securities case when the government was the lead Petitioner. Although an institutional investor was the lead Petitioner in only 3% of the total cases from 1971-2010 (5% of the Stevens sample), it is of note that Stevens wrote a dissent or partial dissent in each of these three cases.

Similarly, when Stevens authored the majority opinion, the government was the lead Respondent in 29% of those cases, more than double the rate in which the government was the lead Respondent in the Stevens cases (14%) or in the total forty-year case sample (13%). By contrast, in none of his fourteen dissenting opinions was the government the lead Respondent (or Petitioner). In short, when Stevens wrote for the Court, the government was far more likely to be a party than when he did not write, whereas when he wrote a dissenting opinion the government was never the lead Petitioner or Respondent.

3. Holdings

100% of the Stevens-authored majority opinions held for the Petitioner even though, across the total case sample and the Stevens sample, the Court held for the Petitioner in 60% of the cases. This compares to the finding that the Court held for the Petitioner in 53% of the cases when Stevens was in the majority (but did not author the majority opinion). Of the seven cases where Stevens wrote the majority opinion, the Court reversed in four cases, reversed and remanded in two cases, and vacated and remanded in one case. The Court affirmed the lower court's opinion (in full or in part) in none of the cases with a Stevens-authored majority opinion. This is despite the finding that affirming the lower court was the most common outcome (in 32% of the total cases and in 29% of the Stevens cases), with the Court affirming in part in an additional 5% of each case sample.

When Stevens wrote a dissent, however, the Court held for the Petitioner in only half of the cases—much closer to the rate of 53% in the cases where Stevens took part in the decision. When Stevens wrote a full dissenting opinion, the Court found for the Petitioner 45% of the time (and for the Respondent 55% of the time); when Stevens wrote a dissent in part, the Court found for the Petitioner 67% of the time (and for the Respondent 33% of the time). Both numbers are notably lower than the 100% rate of holding for the Petitioner in cases where Stevens wrote the majority opinion. In short, Stevens only wrote the majority opinion when the Court found for the Petitioner, but he wrote a dissent more in line with the overall holding average across the forty-year time span and across the cases where Stevens took part in the decision.

As to imposing sanctions, overall the Court declined to impose sanctions in 44% of all cases over the forty-year period (37% of the Stevens cases), and left open the possibility of sanctions in only 34% of all cases over that period (42% of the Stevens cases).[71] When Stevens was in the majority, however, the Court declined to impose sanctions in only 28% of the cases and the possibility of sanctions rises to 49% of the cases. Even more striking, when Stevens authors the majority opinion, the Court's declining to impose sanctions remains stable at 29%, but the possibility of sanctions rises to 57%. Looking to the cases in which Stevens took part in the decision, Stevens either was in the majority or wrote a concurrence for all six opinions where the Court imposed sanctions (monetary or nonmonetary).

When Stevens wrote the dissent, the Court declined to impose sanctions in 64% of those cases, leaving open the possibility of sanctions in 27% of the cases (and not discussing sanctions in 9% of the cases). However, while it might appear that Stevens generally dissented when the Court declined to impose sanctions, it is important to examine the cases as a whole. Across the Stevens cases, Stevens authored the majority opinion in 8%, the dissent in 33%, and a concurrence in 17% of the cases when the Court declined to impose sanctions. However, Stevens joined or wrote a majority opinion or concurrence in 67% of the cases where the Court declined to impose sanctions. Thus, it is not that Stevens dissented whenever the Court declined to impose sanctions, although he did do so in 33% of those decisions. When he did dissent, however, he wrote the dissenting opinion every time. Thus, Stevens appears to have preferred a sanctions outcome for securities law wrongdoing when he was in the majority, and when the Court declined to impose sanctions and he dissented, he was the one to write the dissenting opinion.

When we examine both sanctions decisions and whether the parties were corporations or individuals, Stevens's dissents paint an interesting picture. Overall, the Court was more likely to decline to impose sanctions on a Respondent corporation (60%) than it was in general (44%) or when the Respondent was an individual (35%). Stevens dissented in five of the

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71 In addition, the Court imposed monetary sanctions in only 5% of the cases; imposed other nonmonetary sanctions in 4% of the cases and did not discuss sanctions in 14% of the cases.

eighteen cases when the Court declined to impose sanctions against a corporate Respondent. He wrote the dissent in all five of these cases.

In contrast, in the thirteen cases where the Court declined to impose sanctions on an individual Respondent, Stevens dissented only once—and he wrote the dissent in that case. Also, he dissented in four cases where the Court left open the possibility of sanctions against an individual Respondent, writing the dissent in three of these cases. This suggests that Stevens may have been more favorable toward sanctioning corporate Respondents than individual Respondents, compared to his colleagues on the Court.

4. The Alignment of Justices

Table 1 below isolates the number of Justices (ranging from four to nine) in the majority for all securities opinions in the entire forty-year period and displays where Stevens votes and where he writes, in that context.

Not all categories are separated (e.g., the one case when Justice Stevens is in the concurrence, but did not author the concurrence is included in the "Stevens in majority" column) and others are double counted (e.g., "Stevens majority author" is a sub-set of "Stevens in majority"). Thus, the columns do not add up to the overall number of cases examined.

Number of Justices in the Majority	Number of cases (% of cases in the named sample)							
	Overall sample	Stevens sample	Stevens in majority[72]	Stevens in dissent[73]	Full author Sample	Stevens majority author	Stevens concur author	Stevens dissent Author[73]
4	1 (1%)	--	--	--	--	--	--	--
5	14 (16%)	10 (15%)	3 (8%)	6 (35%)	6 (21%)	1(14%)	1 (13%)	4 (29%)
6	23 (27%)	14 (22%)	9 (23%)	3 (18%)	7 (24%)	3 (43%)	2 (25%)	2 (14%)
7	10 (12%)	9 (14%)	6 (15%)	2 (12%)	3 (10%)	--	1 (13%)	2 (14%)
8	22 (26%)	17 (26%)	9 (23%)	5 (29%)	9 (31%)	1 (14%)	2 (25%)	5 (36%)
9	16 (19%)	15 (23%)	13 (33%)	1 (7%)[73]	4 (14%)	2 (29%)	2 (25%)	1 (7%)[73]
Total	**86**	**65**	**40**	**17**	**29**	**7**	**8**	**14**

Table 1. Number of Justices in the Majority in the Sample Cases (by Case Set)[72, 73]

The alignment of judges in the Stevens sample does not significantly differ from the alignment across the forty-year period. However, the Court

72 The majority category includes the one case where Justice Stevens joined the concurrence, but not the eight cases where Justice Stevens authored the concurrence or the three cases where Justice Stevens concurs in part and dissents in part.

73 The dissent categories include cases where Justice Stevens dissents in part.

was almost five times more likely to be unanimous (and more than four times less likely to be split 5-4) if Stevens was in the majority, indicating that he was a key to achieving that outcome. As shown in Table 1, the Court was unanimous in 33% of the opinions with Stevens in the majority, but unanimous in only 7% of the cases with Stevens in (partial) dissent. When Stevens authored the majority opinion, unanimity existed in only two of the seven opinions, suggesting he was frequently at odds with one or more justices even when he wrote for the majority. His dissenting opinions reveal a mix of speaking for others more than may commonly be appreciated while also, true to reputation, revealing a go-it-alone streak. This is seen in all three partial dissents he authored, where another Justice joined him. In the eleven dissents in whole he authored, he alone wrote a dissenting opinion in ten of those cases, but other justices joined him in five of those opinions. Thus, in eight of his fourteen dissenting opinions, he wrote for others as well, while in six opinions he spoke only for himself. More so than any other Justice during this period, he was willing to write a dissent, even if no other Justice would join him.

IV. DID JUSTICE STEVENS HAVE A DISCERNIBLE PHILOSOPHY IN SECURITIES CASES?

The above quantitative analysis of Stevens's securities law opinions provides an instructive "big picture" perspective on his work in this area. But, only by examining Stevens's opinions themselves can we more clearly understand *why* he reached the outcomes he did and how he saw the Court's lawmaking role in the securities law area, particularly given the dramatic changes that took place during his tenure on the Court. We also believe that examining a justice's actual opinions in an area can provide more nuance and help paint a fuller picture of judicial philosophy than relying solely on various numerical "scores" of justices. For example, a recent study observes that certain conservative justices, such as Justices Powell, Rehnquist, Roberts, and Alito, are "pro-business" as measured against their overall Segal-Cover score, whereas Stevens is slightly liberal by that measure.[74] But, using that same measure, well-known liberal Justices Marshall and Brennan also are fairly pro-business,[75] even though they frequently dissented from the Court's securities decisions. And measured by a justice's votes in business law cases as against his average Martin-Quinn score, all of the just-named justices—Powell, Rehnquist, Roberts, Alito, Stevens, Marshall, and Brennan—are, to varying degrees, pro-business.[76]

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74 *See* Johannes W. Fedderke & Marco Ventoruzzo, *Do Conservative Justices Favor Wall Street? Ideology And The Supreme Court's Securities Regulation Decisions*, 67 FLA. L. REV. 1211 (2015).

75 *Id.* at Figure 10.

76 *Id.* at Figure 11.

Yet, of course, the last three justices frequently disagreed with the Court's securities decisions. Thus, we believe various aggregate measures, while helpful, must be used very cautiously and should be augmented by close examination of individual justice's voting behavior and written opinions.

In this Part, we identify not only Stevens's positions in various cases, but also seek to discern the key elements and recurring themes of Stevens's securities law jurisprudence. As we elaborate on below, Stevens's opinions defy categorization on some simplistic "results-oriented" or supposed ideological basis. Our analysis reveals, not unexpectedly, a justice who took seriously his responsibility to reach his own decisions—while stating why—and who did so by unyielding fidelity to what he considered to be the governing legal principles.

Our analysis also reveals Justice Stevens was mindful of—and openly lamented on occasion—the fact that his understanding of those principles frequently differed from that of a majority of his colleagues. He believed, however, that it was the Court, not him, that had, over the span of several decades (1971-2010), significantly changed legal course in this area. In an important sense, Stevens wrote "against" that movement—a movement in large part led by Justice Powell until 1987, but continuing long after as well—and also to preserve an alternative and, to Stevens, a superior approach to deciding securities law cases. Again, the important memory of Justice Rutledge's enduring dissents may have loomed large in his mind. A recent and ironic example in this regard is that the Court, in a June 2014 opinion authored by Chief Justice Roberts that refused to overturn an earlier precedent,[77] invoked—without citing Stevens—one of Stevens's mainstay rationales for disagreeing with his colleagues in the majority: disturbing earlier Court precedent is generally best left to Congress.

A. *Early Writing in Securities*

Professor Dennis Hutchinson once observed that, early on, Stevens had "no vision and [was] not interested in playing the game."[78] In the securities law area, this comment does not ring true. Stevens wrote a securities law opinion within the first few months on the Court, even though he had joined mid-term.[79] He dissented—alone. In his first securities law opinion, Stevens, as would prove to be characteristic, devoted several pages to history, language, and statutory purpose as he carefully sought to reconcile the narrow venue provision of the National Bank Act with the venue provision of the Exchange Act, preferring the latter. By this opinion, Stevens sig-

77 Halliburton Co. v. Erica P. John Fund, Inc., 134 S. Ct. 2398, 2411-13 (2014).

78 Charles Lane, *With Longevity on Court, Stevens' Center-Left Influence Has Grown*, WASH. POST, Feb. 21, 2006, at A1.

79 Radzanower v. Touche Ross & Co., 426 U.S. 148, 158 (1976) (Stevens, J., dissenting).

naled what Justice Potter Stewart later would say about him: "[H]e's really John Paul Jones—'I have not yet begun to write.'"[80]

During the Court's next term, Stevens again dissented and wrote an opinion—this time joined by Justice Brennan—in a major Exchange Act case.[81] Drawing on the recently decided case of *Cort v. Ash*,[82] a decision curtailing implied private causes of action, the Court held that an unsuccessful tender offer bidder had no claim against target company management or the successful bidder under § 14(e) of the Exchange Act,[83] or Rule 10b-6.[84] Stevens observed, however, that the unsuccessful bidder was also a shareholder in the target company and, in that capacity, should have a claim against the fraudster bidder.[85]

This opinion also sent a signal, namely, that Stevens fully intended to be an engaged jurist in the arcane world of securities law, notwithstanding no professional background in the area. He also began staking out his view on the remedial aspect of these laws. In his *Piper* dissent, Stevens took an expansive view of remedies under the Exchange Act, a recurring hallmark of his writing. Moreover, he made it clear to the very end of his long tenure on the Court that he regarded *Cort v. Ash*, relied on in *Piper*, as a mistaken decision carrying ongoing adverse consequences for the proper remedying of securities offenses.[86] Thirty-three years after *Cort*, Stevens wrote lamentingly that it was a "law-changing opinion . . ."[87]

During that same 1976 term, Stevens concurred in the important case of *Santa Fe Industries, Inc. v. Green*,[88] just one month after the *Piper* decision. The majority held that a shareholder who objected to being "squeezed out" of his minority position pursuant to a short-form merger under Delaware's corporate statute[89] could not thereby bring an action under § 10(b) of the Exchange Act or Rule 10b-5.[90]

Unlike Justice Brennan, who dissented in *Santa Fe* and who had joined Stevens's prior dissent in *Piper,* Stevens concurred in an opinion joined by Justice Blackmun.[91] Stevens agreed with the majority in *Santa Fe* that no deceptive or manipulative conduct—essential to a Rule 10b-5 claim—had been alleged and therefore he concurred in the Court's judg-

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80 Lane, *supra* note 78, at A1.

81 Piper v. Chris-Craft Ind., Inc., 430 U.S. 1, 53 (1977) (Stevens, J., dissenting).

82 422 U.S. 66 (1975).

83 15 U.S.C. § 78n(e) (2015).

84 17 C.F.R. § 240.10b-6 (1964, Supp. 1966).

85 *See id.* at 59.

86 Stoneridge Investment Partners, LLC v. Scientific-Atlanta, Inc., 552 U.S. 148, 178 (Stevens, J., dissenting).

87 *Id.*

88 430 U.S. 462 (1977).

89 DEL. CODE ANN. § 253 (2012).

90 430 U.S. at 474.

91 *Id.* at 480.

ment.[92] But he emphasized that he did not join in Part IV of the majority opinion, with its very broad discussion of policy and the supposed risk of "federalizing" state corporate law, a central and enduring portion of that opinion. Stevens objected to that Part, he noted,[93] because he thought there was a "danger" that it would be read as extending both *Piper* and *Blue Chip Stamps v. Manor Drug Stores*,[94] two decisions that Stevens adamantly believed "were incorrectly decided."[95]

As in *Piper*, and striking a theme that would recur in his securities opinions, Stevens's concurrence in *Santa Fe* displayed his twin aims of adhering to the plain language of the Exchange Act while cautioning that the Act should not, as a remedial matter, be read restrictively. In just his second term on the Court, Stevens seemed to have a strong, prescient inkling of where, during this important transitional era, the Court was headed in curbing securities law remedies, a direction he would, over the years, continually resist. His opinion in *Santa Fe* made it clear as well, and early on, that it should not be assumed he would align with liberal-leaning Justice Brennan on securities law cases. Those two justices frequently parted on securities cases, even during Justice Powell's transformative heyday on the Court.[96] It was, after all, Justice Brennan who wrote the opinion in *Cort v. Ash*,[97] much disliked by Stevens as being a wrong turn that has hobbled investor protection ever since.

B. *Not Simplistically Pro-Investor*

To say that Justice Stevens thought, for a variety of reasons, that the remedial provisions of the federal securities laws should be read broadly is not to say he reflexively favored plaintiff-investors. In the first securities opinion Stevens wrote for the Court,[98] the Court unanimously held that a district court's determination that an action may not be maintained as a class action pursuant to Rule 23 is not a "final decision" that is immediately

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92 *Id.* at 480-81.

93 *Id.* at 481.

94 421 U.S. 723 (1975).

95 430 U.S. at 480-81.

96 As to Justice Powell's important role in altering securities law, *see* Pritchard, *supra* note 23. Although some studies suggest, as in Powell's case with securities law, that conservative judges since the 1960s have been inclined toward overruling what they regard as "liberal" precedents, it was recognized liberal Justice Brennan who wrote the majority opinion in *Cort*, not Powell. *See, e.g.,* Lori A. Ringhand, *Judicial Activism: An Empirical Examination of Voting Behavior on the Rehnquist Natural Court*, 24 CONSTITUTIONAL COMMENTARY 43 (2007); Jeffrey A. Segal & Robert M. Howard, *How Supreme Court Justices Respond to Litigant Requests to Overturn Precedents*, 85 JUDICATURE 148, 156-57 (2001).

97 422 U.S. 66 (1975).

98 Coopers & Lybrand v. Livesay, 437 U.S. 463 (1978).

appealable.[99] The result was a major hurdle to the maintenance of class actions where certification is denied, and it subsequently served to underscore the importance of the certification stage in securities litigation.[100]

And Justice Stevens took what can be characterized as not only an "anti" investor position but also a cramped, and downright puzzling, reading of the Exchange Act in two important companion cases in 1985.[101] The Court, with only Stevens in dissent, held in *Landreth* that the sale of all of the stock in a closely held corporation involved the sale of a "security" even if the buyers themselves intended to operate the business.[102] This holding squelched the budding "sale of business" doctrine, whereunder a sale of corporate stock would not be considered a "security" sale if the purchaser actively ran the business. Under that doctrine, such a transaction was, in substance, merely the sale of a "business" that, only in form, was dressed in the guise of a securities transaction. The companion *Gould* decision, again with only Stevens in dissent, held that the sale of 50% of the stock in a closely held corporation likewise involved the sale of a security.[103] Both opinions were authored by Justice Powell who, although candidly acknowledging some wavering in how the Court had earlier reasoned in cases defining "securities,"[104] saw common stock as the quintessential security.[105]

Justice Stevens dissented in both cases. He did not dispute Powell's view of common stock as being a "security." Instead, he dissented on the quite basic ground that the federal securities laws simply are inapplicable unless a security is traded in a public market, or unless an investor is not in a position to negotiate contractual protection, such as robust warranties and representations, or is unable to insist on access to inside information.[106] Acknowledging the imprecise contours of the federal securities laws, but once again looking to legislative history and policy for guidance, Stevens concluded that Congress simply did not intend to regulate nonpublic securities via the federal securities laws.[107] That position was apparently uniquely held by Stevens, it never gained traction, and of course it would altogether

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99 *Id.*

100 Class certification in securities litigation remains important and contentious after the Supreme Court recently refused to overrule *Basic v. Levinson*, 485 U.S. 224 (1988). Halliburton Co. v. Erica P. John Fund, Inc., 134 S. Ct. 2398 (2014). *See* Todd Henderson & Adam Pritchard, *Halliburton Will Raise Cost Of Securities Class Actions* , LAW360, (July 2, 2014), http://www.law360.com/articles/552839/halliburton-will-raise-cost-of-securities-class-actions.

101 Landreth Timber Co. v. Landreth, 471 U.S. 681 (1985); Gould v. Ruefenacht, 471 U.S. 701 (1985).

102 471 U.S. 681 (1985).

103 471 U.S. 701 (1985).

104 471 U.S. at 688.

105 *Id.* at 694.

106 Justice Stevens' dissent, applicable to both *Landreth* and *Gould*, is found at 471 U.S. 681 (1985).

107 *Id.*

eliminate Rule 10b-5 litigation involving closely held companies, thereby stripping investors of a potent legal theory.[108] Stevens' dissents in these two cases clearly establish that he did not regard preservation of federal remedies for defrauded investors to be in and of itself a sufficient touchstone by which he would interpret the securities laws. Stevens certainly believed in a broad reading of the remedial provisions of those laws, but only where Congress so intended.

In addition, in 2006 Justice Stevens himself authored the "anti-investor" decision in *Merrill Lynch v. Dabit.*[109] The Court there ruled that a state law securities claim brought in federal court on diversity grounds was preempted by the Securities Litigation Uniform Standards Act (SLUSA), even though it was brought by an investor who "held" stock, rather than one who bought or sold stock. Stevens, although ruling against the investor, nonetheless took the opportunity to write that the *Blue Chip Stamps* decision he disliked—limiting Rule 10b-5 claims to "purchasers" and "sellers"—was, properly understood, just a standing case, not one going to the scope of the underlying action.[110] He cited for a properly broad reading of the Rule's "in connection with" language the 2002 opinion for the Court he wrote in *SEC v. Zandford*.[111] Thus, although believing himself bound by Congressional intent as expressed in SLUSA, and therefore holding against the investor in *Dabit*, Stevens, in doing so, sought to preserve as best he could the underlying breadth of Rule 10b-5 for use more generally. This was consistent with his overall approach of reading the remedial provisions of federal securities law broadly, while still being constrained by his understanding of Congress' intent.

C. *Views on Congressional and Judicial Roles in Making Securities Law*

The most striking thread running through Justice Stevens's securities law opinions is his steadfast position on the proper relationship between Congress and the Court in lawmaking. It is his view on this subject, which he believed had been steadily and dramatically altered by the Court over the course of his tenure, that undergirded much of his most spirited writing in this area.

An early procedural ruling in the first of three hostile takeover cases decided by the Court provides an example, as well as revealing Stevens's

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108 In Gustafson v. Alloyd, 513 U.S. 561 (1995), the Court ruled that § 12(a)(2) of the Securities Act did not cover private resale transactions but the Court has never ruled that Rule 10b-5 does not cover such transactions. Not surprisingly, given his views in *Landreth* and *Gould*, Stevens agreed with the holding in *Gustafson*.

109 547 U.S. 71 (2006).

110 *Id.* at 77.

111 535 U.S. 813 (2002).

shrewd use of judicial precedent with which he had initially disagreed.[112] Citing *Radzanower*[113] as authority—a decision he alone had dissented from[114]—Stevens, writing for the Court, held that § 27 of the Exchange Act did not support venue in Texas for an action brought by a tender offer bidder against Idaho officials for enforcing Idaho's anti-takeover statute.[115] Remedially, this outcome was "anti-bidder," unlike Stevens's earlier dissent in *Piper*, which would have authorized private bidder claims, and unlike his subsequent two pro-bidder votes against state anti-takeover statutes on Commerce Clause grounds.[116] But the opinion demonstrated that Stevens sought to give primacy in his rulings to legislative intent, with earlier precedent—even that with which he disagreed—being a constraining and sometimes strategic aid to achieving that end.

Stevens turned, as he often did in his opinion writing, to legislative history—as well as the statutory text itself—in later concurring that the demand requirement of Civil Procedure Rule 23.1 did not apply to an action by an investment company shareholder under § 36(b) of the Investment Company Act alleging excessive investment advisor fees.[117] Beyond noting that Rule 23.1 did not create a derivative right—addressing as it did, only the pleading of such a claim—Stevens extensively surveyed the legislative history of § 36(b) and found no support for imposing a demand requirement.[118]

This turn to history in quest of Congress' intent—and not confining himself to a statute's or rule's text—became a Stevens trademark in numerous opinions he wrote in the securities law area.[119] In the term immediately after the *Fox* case, for example, Stevens sought, to no avail, to argue that legislative history showed no congressional intent to regulate nonpublic

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112 LeRoy v. Great Western United Corp., 443 U.S. 173 (1979).

113 *See supra* note 79 and accompanying text.

114 *Id.*

115 443 U.S. at 180-81.

116 CTS Corp. v. Dynamics Corp. of America, 481 U.S. 69 (1987) (Stevens, J., dissenting); Edgar v. MITE Corp., 457 U.S. 624 (1982) (Stevens, J., concurring in part). It is worth noting that Stevens and Powell agreed in *Edgar v. MITE* that the Illinois Act challenged there was not preempted by the Williams Act, and Powell expressly agreed even with the key part of Stevens' phrasing on this point. 457 U.S. at 647, 655. They parted company in *CTS*, however.

117 Daily Income Fund, Inc. v. Fox, 464 U.S. 523 (1984).

118 *Id.* at 545 (Stevens, J., concurring).

119 Although a recent study suggests that liberal justices use the interpretive technique of examining legislative history more often than conservative justices, we make two observations with specific regard to Justice Stevens in this respect. First, he paid close attention to the text of a rule or statute as well, but where that was not conclusive, he turned to legislative history, or he did so to support the textual reading. Second, as pointed out in *supra* notes 99-106 and accompanying text, Stevens looked to history even where doing so led him to an "anti-investor" conclusion, not to reach some ex ante preferred policy outcome. *See* David Law & David Zaring, *Law Versus Ideology: The Supreme Court and the Use of Legislative History*, 51 WM. & MARY L. REV. 1653, 1739 (2010).

securities.[120] Adopting Stevens's view in this regard would substantially reduce remedies for defrauded investors in nonpublic securities, but, on principle, Stevens faithfully followed where he thought the legislative trail led. That same term, he more successfully drew on his customary detailed look at legislative history in writing for a unanimous Court.[121] The Court ruled that a convicted fraudster could publish a newsletter of general circulation that offered no personal investment advice, because of an exclusion under the Investment Adviser's Act that Stevens painstakingly reviewed.[122]

In several high-profile cases, Stevens's use of legal history took a different and significant turn. He argued, in essence, that longstanding, "settled" judicial interpretations of the federal securities laws should be altered, if at all, only by the Legislative branch, not the Judicial.[123] Thus, when in *Shearson/American Express v. McMahon* the Court held that § 10(b) claims are arbitrable, Stevens, along with Justices Blackmun, Brennan, and Marshall, dissented, but he wrote separately from the other dissenters. Stevens stated that his disagreement with the majority was on the narrow but critical basis that such a dramatic departure in how securities law disputes had long been resolved should be undertaken by Congress, not the Court.[124]

Stevens elaborated on his view of the respective roles of the Court and Congress in lawmaking when, two years later, he dissented from the Court's holding—and overturning of a 36-year precedent[125]—that Securities Act claims also can be arbitrated.[126] Stevens fully acknowledged that there were respectable policy and textual arguments favoring the Court's reconciliation of the Federal Arbitration Act and the remedial provisions of the Securities Act.[127] But in an opinion joined this time by Justices Blackmun, Brennan, and Marshall, Stevens first scolded the Court of Appeals for what he called an "indefensible brand of judicial activism" in not treating *Wilko v. Swan* as controlling precedent.[128] He then rebuked the Court's majority for not leaving intact a judicial interpretation of an act of Congress that had been settled for many years.[129] Given that for several decades Congress itself had not acted to legislatively change that interpretation, the Court,

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120 *See supra* notes 101-05 and accompanying text.

121 Lowe v. S.E.C., 472 U.S. 181 (1985).

122 *Id.*

123 *See, e.g.*, Shearson/American Express, Inc. v. McMahon, 482 U.S. 220 (1987) (Stevens, J., concurring in part and dissenting in part).

124 *Id.*

125 Wilko v. Swan, 346 U.S. 427 (1953), *overruled by* Rodriguez de Quijas v. Shearson/American Express, Inc., 490 U.S. 477 (1989).

126 Rodriguez de Quijas v. Shearson/American Express, Inc., 490 U.S. 477 (1989) (Stevens, J., dissenting).

127 *Id.* at 487.

128 *Id.* at 486.

129 *Id.* at 487.

Stevens argued, should respect that quiescence as the settled and authoritative "work product" of Congress.[130]

Interestingly, in June 2014, the Supreme Court refused to overrule a key securities law decision from 16 years earlier that one party, joined by many amici, contended had been wrongly decided.[131] In declining to do so, Chief Justice Roberts, writing for the Court, responded that doing so required "special justification"—absent at bar, he declared—because it was for Congress to decide whether the Court had gotten it wrong.[132] Although Stevens's writings were not cited, the reasoning of this 2014 decision was quite similar to that employed by Justice Stevens in his dissent 25 years earlier.

Repeatedly, Stevens anchored his securities opinions on this approach to judging as he witnessed the Court's dramatic transformation of the securities law landscape during the 1980s and 1990s. Concurring in *Reves v. Ernst & Young*,[133] that promissory notes are not per se "securities" under the Exchange Act, Stevens emphasized that the "settled construction" given to the definition of "note" by the SEC and Courts of Appeal should not be disturbed unless Congress so decides.[134] He later repeated this philosophy in dissenting from the Court's abrupt change to the longstanding Rule 10b-5 statute of limitation.[135] But here, Stevens added a new dimension that better grounded his conviction that the Court was rapidly re-writing federal securities law all by itself.

In dissenting from the Court's adoption of a uniform federal statute of limitations period for 10b-5 claims, Stevens noted that because the Court had long borrowed limitations periods from the forum state, it was for Congress, not the Court, to decide whether to alter that settled principle.[136] Moreover, seeking to resist what he saw as the continued whittling-back of Rule 10b-5 as a robust remedy, Stevens offered a new interpretation of the implied private remedy under this Rule.[137] He argued that the first district court opinion recognizing an implied private cause of action under Rule 10b-5 in 1946 was not really "new law."[138] This is because, Stevens asserted, in 1946, as in the early 1930s when the federal securities laws were enacted, it was a "well-settled rule" of federal law to imply a private claim when a violation of a statute causes damage to one for whose benefit the

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130 *Id.* at 486.

131 Halliburton Co. v. Erica P. John Fund, Inc., 134 S. Ct. 2398, 2407 (2014).

132 *Id.* at 2407, 2413.

133 494 U.S. 56 (1990).

134 494 U.S. at 74 (Stevens, J., concurring).

135 Lampf v. Gilbertson, 501 U.S. 350, 366 (1991) (Stevens, J., dissenting).

136 Again, this is exactly the reasoning of the Court in refusing in 2014 to overrule an earlier precedent. *See supra* notes 131-32 and accompanying text.

137 501 U.S. at 366-69 (Stevens, J., dissenting).

138 *Id.* at 366-67 (citing *Kardon v. Nat'l Gypsum Co.*, 69 F. Supp. 512 (E.D. Pa. 1946)).

statute was adopted.[139] In short, he contended that the Court's majority, in overturning precedent in the 1980s and 1990s, was single-handedly revamping securities law jurisprudence, quite apart from Congress, the proper body for doing so.

When the Supreme Court three years later eliminated a private claim for aiding and abetting a Rule 10b-5 violation,[140] Stevens again dissented on the basis that the Court was wrongly disturbing a settled construction of the Exchange Act that only Congress should, if at all, modify.[141] He believed that the eleven Circuit Courts that had long recognized private claims for aiding and abetting were closer to the legal climate of the 1930s when these landmark laws had been enacted.[142] As such, their interpretation should prevail, subject only to congressional action.[143] Citing his concurrence in *Reves*, and noticeably upping the fervor of his judicial distress, Stevens also cautioned the Court not to "lop off rights" that had been "recognized for decades."[144]

Stevens's position that Congress, not the Supreme Court, rightly had the chief role in designing federal securities law was evident again when he dissented the following year from a decision striking down an act of Congress on separation of powers grounds.[145] After *Lampf* had abruptly shortened the statute of limitations for Rule 10b-5 claims,[146] many such pending claims were dismissed as untimely.[147] Congress quickly enacted a new provision—§ 27A(b) of the Exchange Act—that reinstated any such claim dismissed as untimely due to *Lampf*.[148] Stevens strenuously argued that Congress was acting within its proper constitutional sphere in providing a limitations rule for those Rule 10b-5 actions pending prior to *Lampf*.[149] He wrote at length as to why Justice Scalia, writing for the majority, had badly misread the Supreme Court precedent that had fully respected Congress's later treatment of final judgments so as to serve remedial purposes.[150]

Stevens's belief in preserving a robust private remedies approach to securities regulation,, as designed by Congress,, is seen as well in his dissent in *Virginia Bankshares, Inc. v. Sandberg*,[151] an important 1991 Ex-

139 *Id.* at 366.

140 Cent. Bank of Denver, N.A. v. First Interstate Bank of Denver, N.A., 511 U.S. 164 (1994).

141 511 U.S. at 192-201 (Stevens, J., dissenting).

142 *Id.* at 193.

143 *Id.* at 198.

144 511 U.S. at 201.

145 Plaut v. Spendthrift Farm, Inc., 514 U.S. 211 (1995).

146 Lampf v. Gilbertson, 501 U.S. 350, 364 (1991).

147 Lyman Johnson, *Securities Fraud and the Mirage of Repose*, 1992 WIS. L. REV. 607, 612 (1992).

148 *See id.* at 610-11 n.6.

149 Plaut, 514 U.S. at 261.

150 *Id.* at 260-65.

151 501 U.S. 1083 (1991).

change Act decision distinguished by the Court in the context of § 11 of the Securities Act during its October 2014 term.[152] In the § 11 context, the Court held that if a registration statement omits material facts about the issuer's inquiry into or knowledge concerning a statement of opinion, and those facts conflict with what a reasonable investor would understand, then the omission creates liability.[153] In *Virginia Bankshares*, Stevens had disagreed with the majority's view that no causation could be shown in a Rule 14a-9 claim under the Exchange Act where the wrongdoer controlled enough stock to solely determine the outcome of a shareholder vote.[154] Stevens, noting that the jury in the case had found the merger at issue to be unfair, believed that whether or not a proxy solicitation was required by law or by a company's bylaws was irrelevant because, when corporate management does in fact solicit proxies, an action lies under Rule 14a-9 for making false or misleading statements.[155] The 2015 *Omnicare* decision preserved a remedy for investors with respect to opinion statements with material omissions, precisely the remedy-preserving outcome Stevens long advocated.

In two of his last securities opinions, Stevens's lament at the Court's altered treatment of private claims under Rule 10b-5 was even more pronounced. In the 2008 decision of *Stoneridge Investment Partners, LLC v. Scientific-Atlanta, Inc.*,[156] Stevens dissented from the Court's ruling on the "reliance" element under Rule 10b-5.[157] He repeated his criticism of the 1994 *Central Bank* decision,[158] describing it as "a precedent for judicial policymaking decisions in this area of law."[159] And he derided "the Court's continuing campaign to render the cause of action under § 10(b) toothless,"[160] along with its "mistaken hostility to the private cause of action."[161] He again grounded this position on his reasoning in *Lampf*, that during the era when the federal securities laws had been enacted, it was judicial practice to imply private claims; thus, Congress had authorized a private claim under Rule 10b-5 that the Court had wrongly curtailed.[162] Stevens's disagreement with the Court went, quite fundamentally, to the question of which branch of the federal government—Congress or the Court—should be making these kinds of changes.

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152 *See, e.g.*, Omnicare, Inc. v. Laborers Dist. Council Constr. Indus. Pension Fund, 135 S. Ct. 1318 (2015).

153 *Id.*

154 501 U.S. at 1110 (Stevens, J., dissenting).

155 *Id.* at 1112.

156 552 U.S. 148 (2008).

157 552 U.S. at 167 (Stevens, J., dissenting).

158 Cent. Bank of Denver, N.A. v. First Interstate Bank of Denver, N.A., 511 U.S. 164 (1994).

159 552 U.S. at 175.

160 *Id.*

161 *Id.*

162 *Id.*

Stevens reiterated this strongly held position in his final securities opinion.[163] He concurred in the Court's holding that Rule 10b-5 did not apply to foreign plaintiffs suing foreign and U.S. defendants for misconduct occurring on foreign stock exchanges.[164] He agreed too that the majority's "transactional test" was plausible, but he stressed that the Court should not abandon its prior approaches to jurisdiction.[165] In a summing up of his distress at the long, confining arc of the Court's jurisprudential turn in the Rule 10b-5 area, Stevens stated that while he agreed with the result in the *Morrison* case, he "dissents" yet again from the Court's "continuing campaign to render the private cause of action under § 10(b) toothless."[166] Here Stevens, although concurring in the result, nonetheless manages to register in his last securities opinion a strong "dissent" on the larger, years-long trajectory of case outcomes.

D. *Summary*

Justice Stevens wrote a large number of securities law opinions. But he wrote a large number of opinions of many sorts. As noted earlier,[167] he believed that he had a duty to write. At the same time, it should be remembered that he frequently did *not* write in many cases, including in some high-profile securities law cases. These include *United States v. O'Hagan*,[168] *Dirks v. S.E.C.*,[169] *Basic Inc. v. Levinson*,[170] *TSC Industries, Inc. v. Northway, Inc.*,[171] and *CTS Corp. v. Dynamics Corp. of America*.[172] Where he thought a colleague's opinion for the Court adequately captured his views, he saw no reason to write unnecessarily. And while he refrained from writing a dissent in only three cases where he dissented from the outcome, when he thought another justice sufficiently captured his dissenting views, he also did not write—as was the case in *CTS*—where he joined in Justice White's Commerce Clause analysis.[173] And although he frequently concurred in the Court's securities law decisions but nonetheless wrote—more so than any other justice in history—in all of the high-profile cases above where he thought the majority got it right, he saw no need to state his

163 Morrison v. National Australia Bank Ltd., 561 U.S. 247, 274 (2010) (Stevens, J., concurring).
164 *Id.* at 280.
165 *Id.* at 269-70.
166 *Id.* at 286 (citing his dissent in *Stoneridge*).
167 *See supra* note 44 and accompanying text.
168 521 U.S. 642 (1997).
169 463 U.S. 646 (1983).
170 485 U.S. 224 (1988).
171 426 U.S. 438 (1976).
172 481 U.S. 69 (1987).
173 481 U.S. at 99-102.

views. Thus, Stevens did not write securities law opinions just to write. He wrote when he believed one or more essential points were not being made.

Beyond the substantial numerical contribution made by Stevens to the Supreme Court's body of securities law opinions, this Part has described the key elements of his thinking in this area. At the risk of oversimplifying, two themes stand out. First, Stevens believed that over the course of his lengthy service on the Court, the Court had significantly encroached into what should have remained the legislative domain of Congress. Second, Stevens believed that the federal securities laws, including particularly, §10(b) of the Exchange Act and Rule 10b-5, were intended by Congress to provide robust private remedies for investors in public companies, but that the Court had sharply and wrongly curtailed these avenues for private relief.

Stevens himself, in reflecting on his career, did not consider himself to be an activist on the Court;[174] rather, he believed himself to be a "judicial conservative."[175] Given the transformation he witnessed (and resisted) in securities laws over the period of his service,[176] in his mind, he sought to "conserve" the state of law as it had been[177]—or at least leave it to Congress to alter it, not the Court.

Although Chief Justice Roberts is generally considered to be a more conservative justice than Stevens, he too seeks to "conserve" an existing legal environment.[178] Importantly, however, the securities law environment that Roberts wishes to conserve is the one Stevens sternly resisted, in favor of conserving the securities law world prior to the early and mid-1970s. Many justices, notably Powell and Rehnquist but others also, who are regarded as conservative in judicial philosophy,[179] were key actors in effectuating the very changes Justice Stevens bemoaned and Chief Justice Roberts seeks now to conserve. As observed by Professor John Coates in his recent study on securities law decisions by the Roberts Court, we are "likely *not* to see . . . wholesale reversals of existing doctrines, . . ."[180] The Roberts Court jurisprudence in this area, overall, "does not mark a significant departure from prior Supreme Courts."[181] The judicial activism of an earlier era is now the conservatism of a later one.

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174 Rosen, *supra* note 24 at 52.

175 *Id.*

176 Pritchard, *supra* note 23.

177 In assessing the first few years of securities law decisions of the Court under Chief Justice Roberts, Professor Adam Pritchard found a preference for conserving the legal status quo as well. Adam C. Pritchard, *Securities Law in the Roberts Court: Agenda or Indifference?*, 37 J. CORP. L. 105 (2011).

178 *See supra* notes 131-32 and accompanying text. *See* John C. Coates IV, *Securities Litigation in the Roberts Court: An Early Assessment*, 57 ARIZ. L. REV. 1, 3 (securities cases decided under the Roberts court "are generally preservative and modest in their effects . . .").

179 *See* Fedderke & Ventoruzzo, *supra* note 71, at 39-40.

180 *See* Coates, *supra* note 178, at 34 (emphasis in original).

181 *Id.*

CONCLUSION

Justice Stevens was, in general, a prolific writer of opinions, a fact widely recognized. But, more specifically, he was the most prolific writer of securities law opinions in the history of the Supreme Court, a fact nowhere recognized. He wrote more total securities opinions, more concurring opinions, and more dissenting opinions than any other justice. Using various measures, we offer a novel quantitative analysis of his opinion production. However, we also offer a qualitative assessment of his securities writings. We do so because he wrote during the transformative era of the late twentieth century, and to paint an accurate portrait of Justice Stevens one must take—as he did—a historical view of legal change.

Justice Stevens wrote not just to explain but to remember. He sought to preserve for the corpus of Supreme Court securities law a view of that law—and the Court's proper role in fashioning it—that Stevens thought had been, wrongly, abandoned. As a jurist who once cited in his opinion for the Court a dissent from 56 years before,[182] Justice Stevens took the long view of legal shifts. Securities law changed dramatically during his tenure on the Court. His opinions, as a historical matter, chronicle many particulars of that change, but they also set forth, as a jurisprudential matter, an approach to lawmaking that should be remembered.

182 *See supra* notes 33-35 and accompanying text.

THE ILLEGALITY OF THE DOD 1033 PROGRAM: WHEN THE FEDERAL GOVERNMENT ATTEMPTS TO SIDE-STEP THE POSSE COMITATUS ACT

*Manmeet Dhindsa**

INTRODUCTION

Officials clad in body armor and armed with rifles trekked toward their opposition in mine-resistant vehicles.[1] While hidden behind the protection of their military-grade tanks, the officials showered their unarmed enemies with tear gas, rubber bullets, and stun grenades.[2] Although most commonly associated with military combat, these scenarios now also describe the tactics used by police against United States citizens. In Ferguson, Missouri, a poor town of 21,000, the police force acquired and used advanced military-grade weapons to quell citizens' lawful protests.[3] In Watertown, Connecticut, a town of 22, 514, the police force acquired a mine-resistant, ambush-protected vehicle.[4] In Bloomingdale, Georgia, a locality with 2,713 citizens, the police force added four grenade launchers to its weapons arsenal, despite the likely sufficiency of standard law enforcement weapons to handle its small population.[5] America's police is transforming into an army, and the Department of Defense ("DOD") 1033 Program is to blame.

The DOD 1033 Program[6], also known as the DOD's Excess Property Program, grants the Secretary of Defense the permanent authority to transfer military equipment to federal and state agencies for law enforcement

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1 German Lopez, *11 Things you should know about the Michael Brown Shooting,* VOX (June 15, 2015), http://www.vox.com/cards/mike-brown-protests-ferguson-missouri/mike-brown-shooting-facts-details.

2 Meg Wagner, Greg B. Smith, & Corky Siemaszko, *'Militaristic Displays of Force and Weaponry': Civil Rights Lawsuit by Ferguson Protestors Seeks $40 Million*, NY DAILY NEWS (Aug. 29, 2014), http://www.nydailynews.com/news/national/ferguson-police-sued-40m-article-1.1921271.

3 *Id.*

4 Taylor Wofford, *How America's Police Became an Army: The 1033 Program*, NEWSWEEK (Aug. 13, 2014), http://www.newsweek.com/how-americas-police-became-army-1033-program-264537.

5 *Id.*

6 The DOD 1033 Program is codified in 10 U.S.C. § 2576a.

purposes.[7] Although originally enacted to aid solely counter-drug and counter-terrorism activities, the DOD 1033 Program now supplies military equipment to any local and state law enforcement agencies for any purpose.[8] Agencies have significant discretion in their use of these weapons, as agencies are not required to submit either a pre-authorization or a post-use assessment of how they used the equipment.[9] Currently 11,000 local agencies nationwide are registered for the DOD 1033 Program, with 8,000 of those agencies actively using the DOD 1033 Program's military equipment.[10] To supply these agencies, the DOD has gathered and distributed almost 900 armored vehicles, 533 aircraft, and over 90,000 machine guns.[11]

Since its founding, the United States has required a separation of military and civil law enforcement, eventually codifying this separation in the Posse Comitatus Act of 1878 ("Posse Comitatus Act").[12] The Posse Comitatus Act forbids the willful use of any part of the Army or Air Force to execute civil law.[13] This comment will argue that the DOD 1033 Program's transfer of military-grade equipment to local law enforcement agencies violates this long-held separation and is therefore illegal. Consequently, the DOD 1033 Program must be eliminated and replaced by the recently repealed Insurrection Act Amendments of 2006.[14]

Part I of this Comment will explore the background of the Posse Comitatus Act, including the Act's 1981 Amendments, and the background of the DOD 1033 Program. Part II will study United States case law regarding the provision of military equipment to state and local law enforcement. Part III will distinguish the case law in Part II by analyzing the legislative history of the Posse Comitatus Act and applying it to the DOD 1033 Program. Part IV will propose the solution of disbanding the DOD 1033 program and reverting back to the recently repealed Insurrection Act.

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7 DANIEL H. ELSE, CONG. RESEARCH SERV., R43701, THE "1033 PROGRAM," DEPARTMENT OF DEFENSE SUPPORT TO LAW ENFORCEMENT SUMMARY (2014), http://fpc.state.gov/documents/organization/231773.pdf; 10 U.S.C. § 2576a (2015).

8 ELSE, *supra* note 7, at Summary.

9 *Id.* at 3-4, providing that while an agency must apply to be a part of the DOD 1033 Program, the compliance measures deal with the handling and tracking of the property, not the purposes for which the equipment is used. Although state coordinators may investigate the alleged misuse of property, it does not state that the DOD 1033 Program requires agencies to regularly report on how they used the equipment.

10 *Id.* at 3.

11 Meteor Blades, *The U.S. Militarization of Police Displayed in Ferguson has been going on across America for Decades*, DAILY KOS (Aug. 14, 2014), http://www.dailykos.com/story/2014/08/14/1321538/-The-U-S-militarization-of-police-displayed-in-Ferguson-has-been-going-on-across-America-for-decades#.

12 ELSE, *supra* note 7, at 1.

13 18 U.S.C. § 1385 (2012).

14 10 U.S.C. § 333 (2006).

I. BACKGROUND

Since the founding of the United States, the Federal Government has slowly eroded the United States' historical adherence to the separation of military and civil law enforcement. The most recent erosion of this separation is the DOD 1033 Program. This section will discuss the background of both the Posse Comitatus Act and the DOD 1033 Program.

A. *Posse Comitatus Act*

The United States' tradition of separating military activities from civil law enforcement can be attributed to the Magna Carta, which first documented this necessary separation.[15] Using that influence, the Founders of the United States inserted a provision in the Articles of Confederation requiring that "the Armed Forces assembled during peacetime be no more numerous than absolutely necessary for the common defense; by entrusting control to civil authorities within the states; and by a preference for the farmer in arms as a member of the militia over the standing professional army."[16] The Founders carried that idea into the Constitution, and created a similar provision in the Bill of Rights, requiring that the quartering of troops in private homes be limited and that a Militia not infringe upon the rights of the people.[17] Despite the recognition of this separation in founding documents, Congress did not codify the separation until 1878,[18] after President Grant continued to violate this mandated separation.

Following the Civil War, President Grant used military forces to enforce anti-slavery laws throughout the Southern states.[19] He also used the federal troops for many other purposes, including "suppressing illegal production of whiskey; assisting local officials in quelling labor disturbances; and insuring the sanctity of the electoral process in the South by posting guards at polling places."[20]

Congress did not react, however, until after the 1876 presidential election.[21] During this election, President Grant authorized the use of military forces to watch over various polls in the South to ensure the victory of the

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15 CHARLES DOYLE & JENNIFER K. ELSEA, CONG. RESEARCH SERV., R42659, THE POSSE COMITATUS ACT AND RELATED MATTERS: THE USE OF THE MILITARY TO EXECUTE CIVILIAN LAW 2 (2012), http://fas.org/sgp/crs/natsec/R42659.pdf.

16 *Id.* at 4.

17 *Id.* at 5.

18 18 U.S.C. §1385 (2015).

19 Clarence I. Meeks, III, *Illegal Law Enforcement: Aiding Civil Authorities in Violation of the Posse Comitatus Act*, 70 MIL. L. REV. 83, 90 (1975).

20 *Id.*

21 *Id.*

Republican Party.[22] Furious that President Grant used military forces over a predominantly state and local function, the Democratic-led House demanded that Congress pass a law to prohibit the use of the Army in a law enforcement role.[23] This law became the Posse Comitatus Act of 1878, which states the following:

> "*Whoever, except in cases and under circumstances expressly authorized by the Constitution or Act of Congress, willfully uses any part of the Army or the Air Force as a posse comitatus or otherwise to execute the laws shall be fined under or imprisoned not more than two years, or both*."[24]

As stated, the Posse Comitatus Act does not prohibit the use of military forces if authorized by the Constitution or an act of Congress. However, because the Constitution contains no express provision authorizing the military to execute civilian law,[25] military forces may only be used for this purpose if authorized by Congress.

Although the majority of the Posse Comitatus Act's meaning has remained untouched, Congress has enacted various amendments to the Posse Comitatus Act to keep the United States safe and secure. First, in 1981, Congress passed amendments to allow the Armed Forces to provide civil law authorities with military personnel and equipment to assist in combating drug smuggling in the United States.[26] These amendments stated that the Secretary of Defense could provide and train federal, state, and local civilian law enforcement officials in the operation and maintenance of equipment to combat the security threat imposed by drug smugglers.[27]

These amendments, codified in 10 U.S.C. §§ 372-73, imposed three general caveats: (1) the aid could not be used in any way to undermine the military capability of the United States; (2) the civilian law enforcement agencies had to pay for the military assistance; and (3) the military could not conduct searches and seizures for the benefit of the civilian law enforcement.[28] Despite Congress's attempt at restricting the military authority, these new amendments met serious criticism. 10 U.S.C. §372 was seen as "making the military a 'property clerk' and a routine active partner in civil law enforcement, contrary to the traditional perception of the military

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22 *Id.*

23 *Id.*

24 18 U.S.C. § 1385 (2015).

25 JENNIFER ELSEA, CONG. RESEARCH SERV., RS20590, THE POSSE COMITATUS ACT AND RELATED MATTERS: A SKETCH 2 (2005).

26 *Id.*

27 10 U.S.C. §§ 372-373 (2015).

28 Elsea, *supra* note 25, at 3.

as a mere passive source of occasional assistance in emergencies."[29] Similarly, people criticized §373 as allowing the "military to assume functions that are or should be the routine responsibilities of civilian police academies."[30]

B. *Department of Defense 1033 Program*

In 1989, the National Defense Authorization Act gave the DOD the primary role of detecting and monitoring illegal drug production and smuggling.[31] To help facilitate this task, the National Defense Authorization Act of 1990 and 1991 allowed the DOD to directly transfer equipment to federal and state agencies for use in counter-drug activities.[32] However, this created only a temporary authority that expired on September 30, 1992.[33] Congress extended this authority until September 30, 1997 by the National Defense Authorization Act of 1993.[34]

During the 104th Session, Congress decided to make this authority of the Secretary of Defense permanent through the National Defense Authorization Act of 1997, codified by 10 U.S.C. § 2576A.[35] This Congressional action allowed the permanency of the authority with the caveat that the priority in property transfer lay with counter-narcotics and counter-terrorism activities.[36] This authority became known as the DOD 1033 Program.[37]

The Law Enforcement Support Office ("LESO") of the Defense Logistics Agency administers the DOD 1033 Program.[38] Although LESO is the primary administrator of the DOD 1033 Program, LESO must follow the Defense Logistic Agency's overarching policy, which requires that the equipment administered to state and local law enforcement agencies "be suitable for law enforcement purposes."[39] Although this policy would seemingly require an investigation into the administration and use of the military equipment to ensure compliance with this policy, LESO's proce-

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29 Roger Blake Hohnsbeen, *Fourth Amendment and Posse Comitatus Act Restrictions on Military Involvement In Civil*, 54 GEO. WASH. L. REV. 404, 419 (1986).

30 *Id*. at 423.

31 Else, *supra* note 7, at 1.

32 *Id.* at 1-2.

33 *Id*. at 2.

34 *Id.*

35 10 U.S.C. § 2576A (2015); *see* Else, *supra* note 7, at 2.

36 Else, *supra* note 7, at 2.

37 *Id*

38 Def. Logistics Agency, *1033 Program FAQs*, DLA DISPOSITION SERVICES, (Nov. 21, 2015), http://www.dla.mil/DispositionServices/Offers/Reutilization/LawEnforcement/ProgramFAQs.aspx.

39 DEF. LOGISTICS AGENCY, DLAI 8160.01, LAW ENFORCEMENT SUPPORT OFFICE (LESO) 1, 2014 WL 3835282 (2014).

dures do not thoroughly examine a law enforcement agency's participation in the DOD 1033 Program.

LESO allows state and local law enforcement agencies to participate in the DOD 1033 Program with few conditions. Law enforcement agencies wishing to participate must apply to LESO's state coordinator, who then approves or disapproves applications.[40] Applications approved by the state coordinator are then sent to LESO for final approval.[41] To be approved, the application need only satisfy two criteria: (1) that the equipment will be used for "law enforcement purposes," with an emphasis on counterdrug and counterterrorism purposes; and (2) that the transfer would result in a "fair and equitable distribution" of property based on current inventory.[42] Once its application is approved, the agency receives the military equipment.[43]

According to LESO, 11,000 local agencies nationwide are registered for the DOD 1033 Program, with 8,000 of those agencies actively using the Program's military equipment.[44] However, other statistics estimate more than 17,000 law enforcement agencies from every state and territory of the United States participate.[45] Since the beginning of the program, the DOD 1033 Program has transferred more than $5.4 billion worth of property.[46]

The materials available to the participating states include mine-resistant, ambush-protected vehicles, assault rifles, battle uniforms, battering rams, aircraft, and thousands of other types of military equipment.[47] This equipment must be used within one year of being loaned to the participating agency, or else must be returned.[48] In return for this military equipment, recipients have only two significant requirements: (1) recipients may not sell the equipment loaned to them; and (2) recipients must maintain accurate inventories of the loaned equipment.[49]

These sparse requirements are outdone only by LESO's far sparser accountability measures. Oversight of the local agencies requires an annual inventory check and bi-annual program compliance review.[50] The annual inventory requirement is done by the state itself and solely requires states to note whether the weapons remain in the agency's inventory or whether they have been used.[51] The inventory check does not require an explanation of

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40 ACLU, WAR COMES HOME: THE EXCESSIVE MILITARIZATION OF AMERICAN POLICING 29 (2014).

41 *Id.* at 94.

42 *Id.* at 29.

43 10 U.S.C. §2576A (2015).

44 Else*, supra* note 7 at 3.

45 ACLU, *supra* note 40, at 24.

46 Def. Logistics Agency, *supra* note 38.

47 *See generally* ACLU, *supra* note 40.

48 DEF. LOGISTICS AGENCY, *supra* note 39, at 9.

49 ACLU, *supra* note 40, at 29.

50 DEF. LOGISTICS AGENCY, *supra* note 39, at 5-6.

51 *Id.*

how weapons were used or during what circumstance the agency used them.[52] The program compliance review is done less frequently, requiring a review only once every two years.[53] Once again, this compliance review fails to address how law enforcement agencies used the weapons.[54]

The DOD 1033 Program's disciplinary mechanisms are also minimal. Participants who fail to meet the Program's requirements incur punishments, including suspension for a minimum of thirty days or potential termination from the DOD 1033 Program.[55] However, the termination punishment has rarely been utilized despite multiple agencies' history of misuse. In 2013, LESO temporarily suspended twenty-one states for inventory accountability and management control issues, and in 2014 LESO suspended six states for the same reasons.[56] Despite the continued misuse and abuse by a significant number of law enforcement agencies, the DOD 1033 Program permits the continual transfer of military-grade weapons to these agencies after solely a month-long suspension, and with no increased oversight or punishment.[57]

Despite the military capabilities of the loaned equipment, the DOD 1033 Program also provides limited training of the loaned equipment. Although LESO holds an annual training conference, it merely provides a briefing of "information on training, technical support, equipment, and facilities."[58] Additionally, the briefing requires that only one representative of a state, such as the state coordinator, attend the briefing.[59] There is no mandate that law enforcement personnel—the ones actually using the weapons on American citizens—attend the annual briefing.

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52 *Id.*

53 *Id.* at 6.

54 *Id.* at 7.

55 *Comm. on S. Homeland Sec. and Gov't. Affairs: Hearing on Oversight of Fed. Programs for Equipping Sate and Local Law Enforcement* Agencies, 113th Cong. (2014) (testimony of Alan Estevez, Principal Deputy Under Secretary, Acquisition, Logistics and Technology, Department of Defense), http://www.hsgac.senate.gov/hearings/oversight-of-federal-programs-for-equipping-state-and-local-law-enforcement.

56 *Id.*

57 *Id.*

58 DEF. LOGISTICS AGENCY, *supra* note 39, at 9.

59 ACLU, *supra* note 40, at 30.

II. THE CASE OF WOUNDED KNEE AND ITS EFFECT ON THE POSSE COMITATUS ACT

The situation at Wounded Knee became one of the longest lasting civil disorders in United States history, lasting a total of seventy-one days.[60] On February 27, 1973, members of the American Indian Movement gained control of Wounded Knee, South Dakota, and held the Pine Ridge Reservation hostage, demanding that the United States Government comply with 18th and 19th century treaties.[61] Within hours, police surrounded the town and prevented the American Indian Movement protestors from gaining more control by refusing access to or egress from the reservation.[62] During the standoff, the United States Marshals and the FBI provided assistance to the local police force in the form of both personnel and equipment.[63] This use of federal equipment and personnel during a local civil disorder created a line of cases interpreting the Posse Comitatus Act. Two of those cases, *United States v. Jaramillo* and *United States v. Red Feather,*[64] deal with the provision of military equipment during the civil disorder.

A. *United States v. Jaramillo*

During the standoff of Wounded Knee, the United States Marshals and the FBI created a roadblock in order to prevent anyone from entering or leaving the Pine Ridge Reservation.[65] On March 9, 1973, the defendants of *Jaramillo* attempted to enter the Pine Ridge Reservation, despite the enforcement agencies' roadblock, by shooting at the officers conducting the block.[66] The defendants were indicted for interference of a federally protected function.[67] The defendants, however, argued that they could not have interfered with a federally protected function because the federal officials were not lawfully engaged in the performance of official duties.[68] To find that the officials were engaged in the lawful performance of their duties, the

60 Emily Chertoff, *Occupy Wounded Knee: A 71-Day Siege and a Forgotten Civil Rights Movement*, THE ATLANTIC (Oct. 23, 2012), http://www.theatlantic.com/national/archive/2012/10/occupy-wounded-knee-a-71-day-siege-and-a-forgotten-civil-rights-movement/263998/.

61 *Id.*

62 *Id.*

63 John R. Longley, III, Comment, *Military Purpose Act: An Alternative to the Posse Comitatus Act – Accomplishing Congress's Intent with Clear Statutory Language*, 49 ARIZ. L. REV. 717, 721-22 (2007).

64 United States v. Jaramillo, 380 F. Supp. 1375, 1376 (D. Neb. 1974); United States v. Red Feather, 392 F. Supp. 916 (D.S.D. 1975).

65 *Jaramillo*, 380 F. Supp. at 1377.

66 *Id.*

67 *Id.* at 1377-78.

68 *Id.* at 1378.

Government had the burden of showing it did not violate the Posse Comitatus Act, by proving it did not use "any part of the Army or the Air Force to execute the laws."[69]

The Court began its discussion by questioning whether the "substantial amounts of material and equipment furnished by the Army" constituted a violation of the Posse Comitatus Act.[70] The Court concluded that because the use of military supplies and equipment was never mentioned in the legislative history of the Posse Comitatus Act, nor could be read into the words of the Act, the Posse Comitatus Act never intended to exclude the furnishing of military equipment.[71]

However, the Court reached a different conclusion regarding the use of military personnel during Wounded Knee. In one instance, the Court found that an official whose primary role involved "keep[ing] an inventory of the military supplies and equipment furnished" and advising the "Department of Defense of the availability and location of requested supplies and equipment" constituted a "part of the Army or the Air Force" for purposes of the Posse Comitatus Act.[72]

The Court ultimately acquitted the defendants due to the Government's inability to meet its burden of proving that the officials were "lawfully engaged in the lawful performance of their official duties."[73]

B. *United States v. Red Feather*

The facts in this case stem from the Federal Government's involvement in Wounded Knee during all seventy-one days of the civil disorder.[74] Arguing that the federal officials did not lawfully engage in the performance of their official duties, the defendants in this case attempted to introduce evidence of officials using military forces contrary to the Posse Comitatus Act.[75] The case of *Red Feather* involves the Federal Government's motion to prohibit the defendants from introducing this evidence.[76] In particular, the Government sought restriction of evidence concerning

> *"(1) the loan and/or sale of military equipment to the Department of Justice used in its operations during the occupation in 1973 of Wounded Knee, South Dakota; (2) the presence of Department of Defense observers*

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69 *Id.* at 1380-81.

70 *Id.* at 1379.

71 *Id.*

72 *Id.* at 1380.

73 *Id.* at 1381.

74 United States v. Red Feather, 392 F. Supp. 916 (D.S.D. 1975).

75 *Id.* at 918.

76 *Id.*

> *at Wounded Knee; and (3) any other involvement in 1973 of the Department of Defense at Wounded Knee, South Dakota."*[77]

The Court denied the Government's motion and allowed the defendants to present evidence of the use of military forces contrary to the Posse Comitatus Act.[78]

However, despite the evidence, the Court found that the federal officials were not in violation of the Posse Comitatus Act. The Court in *Red Feather*, like *Jaramillo*, used the legislative history of the Posse Comitatus Act to deny that the statute intended to cover the provision of materials.[79] According to the Court, because the Posse Comitatus Act prohibits only the active use of federal personnel and was never intended to prohibit the furnishing of equipment, the officials were not in violation of their lawful duties when they used federal equipment during the standoff.[80]

The Court also permitted the provision of military-grade weapons and equipment because the Posse Comitatus Act only disallowed the use of "direct" participation in executing the laws.[81] According to the Court, the phrase "to execute the laws" meant a direct, active participation in executing the law, and the loaning of equipment only constituted a passive role, which is not what Congress had intended to prohibit.[82]

Lastly, the Court proffered a "practical argument" for why the Posse Comitatus Act did not extend to the furnishing of military weapons and equipment.[83] The Court explained that "[d]uring and after any natural disaster in this country…there is always the possibility of looting and other acts of civil disorder."[84] Because local law enforcement often do not have the tools to sufficiently deal with these situations, the Court explained that, if

> *"the elements of civic disorder as defined by 18 U.S.C. § 232 are present… it would violate common sense and do violence to the intent of Congress in passing 18 U.S.C. § 1385 [the Posse Comitatus Act] to hold that those arrested for criminal acts must be released because law enforcement officers were using military equipment to aid in executing the law."*[85]

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77 *Id.*

78 *Id.*

79 *Id.* at 921.

80 *Id.* at 922-23.

81 *Id.* at 925.

82 *Id.*

83 *Id.* at 924.

84 *Id.*

85 *Id.*

III. THE INCLUSION OF MILITARY WEAPONS IN THE POSSE COMITATUS ACT

The Court in *Jaramillo* held that the Posse Comitatus Act did not limit enforcement agencies' use of federal equipment, but rather only prevented federal troops from executing law. However, while there may have been a distinction between the use of military personnel and the use of military weapons at the time *Jaramillo* was decided, this distinction has disintegrated due to the DOD 1033 Program. As the DOD 1033 Program is currently implemented, the use of military weapons must be included in the Posse Comitatus Act's definition.

Congress enacted the Posse Comitatus Act to ensure that citizens were not subjected to and oppressed by the power of the Armed Forces.[86] This potential oppression does not stem from the military personnel themselves. Rather, it is the force found in their equipment that give military forces the power to coerce activities. Military forces do not have a legal or inherent authority to regulate citizens' actions[87], and therefore it is not their mere presence that suddenly creates a legal duty upon citizens. Local law enforcement agencies, on the other hand, have a state's police power authority to maintain the health, peace, and safety of a state's citizens.[88] The local law enforcement's inherent authority plus the force and coercive nature of the military equipment loaned to the agencies creates as much as, if not more of, an impact on citizens than the mere involvement of military personnel.

Additionally, the *Jaramillo* Court's contention that the framers of the Posse Comitatus Act did not intend to prohibit the use of federal equipment is not founded. The Posse Comitatus Act states that it is unlawful to use "any part of the Armed Forces or Air Force."[89] The courts have taken this seemingly unambiguous phrase to institute a limiting interpretation so that "any part" of the Armed Forces refers solely to personnel and excludes equipment from that broad category.[90] This interpretation cannot be read into what the Act's framers intended, as evidenced by the legislative history of the Posse Comitatus Act.

Congress's intended meaning of the phrase "any part" can be surmised by investigating the legislative history of another phrase of the Posse Comi-

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86 ELSE, *supra* note 7, at 1.

87 *ATP 3-39.33: Civil Disturbances*, DEPARTMENT OF THE ARMY (Apr. 2014), http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/atp3_39x33.pdf (providing that "The Constitution of the United States, laws, regulations, policies, and other legal issues limit the use of federal military personnel" in domestic operations unless exceptions are prescribed by the Constitution or Congress).

88 *Police Powers*, US LEGAL (2016), http://municipal.uslegal.com/police-powers/.

89 18 U.S.C. § 1385 (2015).

90 *See* United States v. Jaramillo, 380 F.Supp. 1375, 1376 (D. Neb. 1974); United States v. Red Feather, 392 F.Supp. 916 (D.S.D. 1975).

tatus Act, the phrase "willfully uses." When Congress began drafting the Posse Comitatus Act, debate ensued over whether to expand the phrase "willfully uses any part of the Army and Armed Forces" to "willfully and *knowingly* uses any part of the Armed Forces or the Air Force."[91] However, in the end, the drafters decided that "willful" uses of the Armed Forces encompassed their intent.[92] The absence of a "knowing" mens rea provides an opportunity for the military to unintentionally help execute the laws. If the Posse Comitatus Act was meant to pertain only to military personnel, then the addition of "knowing" would have been appropriate because personnel actively involved in a situation would knowingly be using a part of the Armed Forces—themselves. However, according to the language ultimately adopted by Congress, the military need only willfully help execute the laws, which encompasses activities beyond knowing assistance. This indicates that Congress did not intend to prohibit solely the use of personnel.

Local law enforcement agencies were never meant to have the same power and force as the United States military. The Insurrection Act proves this. Congress created the Insurrection Act in order to allow the President to send military forces to states during an insurrection or civil disorder.[93] Local and state law enforcement were meant to deal with situations to the best of their capabilities, and if their equipment and capabilities fell below what was necessary, the President and Congress could then authorize federal troops to the area.[94] The Insurrection Act demonstrates that Congress understood the military to have more powerful capabilities than local law enforcement.

Once local law enforcement agencies achieve the same capabilities and force as the military in the form of weapons, they become military troops for purposes of their activities. This is especially true with the way the DOD 1033 Program is implemented. The DOD 1033 Program gives local and state law enforcement agencies unrestricted, continuous access to dangerous and coercive military weapons.[95] When local and state law enforcement agencies have this continual ability to rise to the force and capabilities of the military at any point, they are no longer merely local law enforcement agencies; they are by practice and by definition the military. In fact, the law enforcement agencies participating in the DOD 1033 Program are more dangerous than military troops in regards to civilian protection due to the lack of training the DOD 1033 Program provides its recipients.

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91 *See* Def. Logistics Agency, *supra* note 38.

92 *Id.*

93 *See* Doyle & Elsea, *supra* note 15, at 32.

94 *Id.*

95 *See* ACLU, *supra* note 40, at 21.

IV. THE DIRECT ROLE OF EQUIPMENT LOANING

The Court in *Red Feather* permitted the furnishing of military equipment to local law enforcement agencies because the military's participation in loaning the equipment was "indirect" enough so as to not violate the Posse Comitatus Act.[96] Various other courts have also interpreted the Posse Comitatus Act as only prohibiting direct military involvement, stating that indirect assistance to local law enforcement is permissible.[97]

Courts have defined how an activity can be classified as indirect or direct participation. Military involvement in civil law enforcement constitutes direct participation in the following situations: [1] if the involvement constitutes the exercise of regulatory, proscriptive, or compulsory military power; [2] if the involvement amounts to direct active involvement in the execution of the laws; and [3] if the involvement pervades the activities of civilian authorities.[98] If any of these conditions are met, the assistance is considered direct participation and is therefore unlawful under the Posse Comitatus Act.[99]

It could be argued that when property loaning programs were first enacted, the assistance to law enforcement played only a passive role. However, with the DOD 1033 Program, the involvement of the military is direct. The DOD 1033 Program violates the Posse Comitatus Act in two ways: (1) it pervades the activities of civilian authorities; and (2) it constitutes the exercise of regulatory, proscriptive, or compulsory military power.

The DOD 1033 Program pervades the activities of civilian authorities because it alters how and why enforcement agencies respond to situations. The DOD 1033 Program provides free military equipment and weapons to local law enforcement at absolutely no cost to the local agencies themselves.[100] This incentivizes local law enforcement agencies, especially those with a small population and low budget, to join. Many of the DOD 1033 Program's recipients are less-populated localities with budgets presumably too small to afford more than basic law enforcement weapons. [101] Therefore, the DOD 1033 Program pervades local agencies' decisions, and incentivizes them to acquire advanced equipment that they otherwise would not be able to obtain.

Reports show that when selecting items to acquire from the DOD 1033 Program, local agencies tend to select military grade equipment rather than

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96 *See Red Feather*, 392 F.Supp. at 925.

97 *See* United States v. Dreyer, 767 F.3d 826 (9th Cir. 2014); United States v. Khan, 35 F.3d 426 (9th Cir. 1994).

98 *See Dreyer*, 767 F.3d at 832 (quoting United States v. Khan, 53 F.3d at 431).

99 *See Id.*

100 *See* ACLU, *supra* note 40, at 13.

101 *See* Wagner, *supra* Note 2; Wofford, *supra* Note 4.

the usual equipment used by their police force.[102] Rather than receiving the minimalist weapons required for their job, the DOD 1033 Program incentivizes local agencies to select the more advanced weaponry—the option often more forceful and dangerous than necessary. For example, in Rock County, Wisconsin, a sheriff admitted to purchasing tanks instead of handguns for their police force.[103]

The mere possession of these weapons pervades local agencies' decisions on how to appropriately deal with circumstances. With the DOD 1033 Program, local law enforcement agencies have a year to use their weapons.[104] This time limitation affects agencies' actions because instead of dealing with situations in an efficient and non-forceful manner, they are instead incentivized to react with sniper rifles and tanks, so as not to lose their equipment within a year.

The lack of oversight also pervades the local agencies' decisions. Knowing that LESO will not investigate the agencies' use of the weapons, and no serious repercussions will occur if there is a problem, the local agencies have no reason to limit their use of those weapons. Through the DOD's own admission, the DOD does not know what the law enforcement agencies do with the supplied weapons and equipment.[105]

The equipment furnished by the DOD 1033 Program also constitutes direct involvement because the provision of equipment constitutes the exercise of regulatory, proscriptive, or compulsory military power. In *Bissonnette v. Haig*, the Eighth Circuit held that the use of military roadblocks and armed patrols created an armed defense perimeter and therefore constituted activity that was regulatory, proscriptive, and compulsory.[106] Weapons provided by the DOD 1033 Program have been used in many different scenarios, including those similar to the situation in *Bissonnette*. In Ferguson, Missouri, for example, Ferguson police officials admitted they used armored vehicles provided by the DOD 1033 Program to block citizens from entering particular parts of the city.[107]

V. SOLUTION

The current implementation of the DOD 1033 Program makes little economic sense for United States citizens, law enforcement agencies, and the Federal Government. Between the equipment distribution and the lack

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102 *See* Kristan T. Harris, *Sheriff Purchased Tank Instead of Handguns for* Police, THE RUNDOWN Live (Aug. 3, 2014), http://therundownlive.com/sheriff-purchased-tank-instead-handguns-police/.

103 *Id*.

104 *See* ACLU, *supra* note 40, at 16 ("The federal government requires agencies that receive 1033 equipment to use it within one year of receipt . . .").

105 *See Hearings, supra* note 55 (testimony of Alan Estevez).

106 *See* Bisonnette v. Haig, 776 F.2d 1384, 1391 (8th Cir. 1985).

107 *See Lopez*, *supra* note 1.

of oversight, the DOD 1033 Program requires a large solution to the problems it poses. That solution lies with the Insurrection Act Amendments of 2006.

A. *Insurrection Act of 1807 and its Subsequent Amendments*

The Insurrection Act of 1807 granted the President the power to deploy troops in the event of insurrections and rebellions.[108] Following the passage of the Posse Comitatus Act in 1878, Congress instituted an exception to the Posse Comitatus Act to maintain the Insurrection Act's legality.[109] Since the initial passage of the Posse Comitatus Act, Congress has continued to update the Insurrection Act exception to the Posse Comitatus Act.[110] The 2006 Amendments to the Insurrection Act allowed the President wide discretion in deploying troops to cover acts of terrorism and natural disasters.[111] However, due to concerns about potential Presidential abuse, the 2008 Amendment repealed this broadened power before the Federal Government ever had a chance to invoke it.[112]

B. *The Economic Inefficiency of the DOD 1033 Program and the Benefit of the 2006 Insurrection Act Amendment*

The DOD 1033 Program is ridden with waste and inefficiency. The original intent of the Program was to provide local law enforcement agencies with the DOD's excess property for counter-drug and counter-terrorism purposes.[113] However, as discussed throughout this paper, the DOD 1033 Program has instead been abused by law enforcement agencies and used in scenarios where it is not only an abuse of police power, but also an economic waste.

Some of the weapons that have been provided through the DOD 1033 Program include armored vehicles, aircraft, machine guns, and grenade

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108 *Insurrection Act of* 1807, ch. 39, 2 Stat. 443, 443 (current version codified at 10 U.S.C. §§ 331-335 (2000)).

109 JENNIFER K. ELSEA & R. CHUCK MASON, CONG. RESEARCH SERV., R42659, THE POSSE COMITATUS ACT AND RELATED MATTERS: THE USE OF THE MILITARY TO EXECUTE CIVILIAN LAW 1 (2008).

110 *Id.*

111 *Congress Amends Insurrection Act*, PUBLIC RECORD MEDIA (Feb. 19, 2011), http://publicrecordmedia.com/2011/02/congress-amends-insurrection-act/.

112 Mark M. Beckler, Monograph, *Insurrection Act Restored: States Likely to Maintain Authority over National Guard in Domestic Emergencies*, SCH. OF ADV. MILITARY STUDIES, U. S. ARMY COMMAND & GEN. STAFF COLL., ii, 30 (2008).

113 Else*, supra* note 7, at 2.

launchers.[114] Research has shown that a significant number of these materials are brand-new and have never been used by the DOD.[115] The Federal Government's military budget would be better utilized economically if these brand-new weapons were used in necessary scenarios rather than automatically sent to agencies who use the expensive weapons to address scenarios where standard, less expensive solutions are available and appropriate. The Federal Government must withhold these brand-new weapons unless, and only if, the circumstances mandate their dissemination to the local law enforcement agencies.

There is little economic value in the way the DOD 1033 Program is currently implemented. Currently, as soon as the law enforcement agencies receive the weapons, they are free to use the weapons however and whenever they like with little to no oversight.[116] This provides a number of problems. Most significantly, the lack of oversight leads to widespread abuse by the law enforcement agencies. This not only provides a platform to violate citizens' rights, but it also provides a platform to undermine the DOD 1033 Program's original intent. If local law enforcement agencies decide to use their materials and weapons during average day-to-day police activities as opposed to proper circumstances, then these expensive, military-grade weapons will not be available for use when the local agencies need them for natural disasters or counter-terrorism purposes. The lack of oversight in the DOD 1033 Program creates economic waste of these expensive and limited weapons among a significant number of local agencies.

The Federal Government should therefore retain possession of these weapons until the circumstances necessitate them. This would restrict the misuse of expensive weapons and ensure that the weapons will be available if situations mandate them. The Insurrection Act Amendment of 2006 provides the exact legal framework to allow this to happen. The Insurrection Act Amendment allows the President and Executive Branch to send federal help when state resources are inadequate. This framework would provide the most efficient allocation of weapons and protection of our nation. Although some may argue that the enforcement agencies' lack of readily-available weapons would create a greater inefficiency to deal with the emergency, the Insurrection Act has in the past—and undoubtedly with advanced technology—can in the future, sufficiently meet circumstances, both in a timely manner and with proper reinforcements. Therefore, the DOD 1033 Program should be eradicated and replaced by the recently repealed 2006 Amendments to the Insurrection Act.

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114 Meteor Blades, *supra* note 11; Wofford, *supra* note 4.

115 *Coalition Including ACLU Asks Defense Secretary for Moratorium on 1033 Program that Militarizes Local Police*, ACLU (Oct. 27, 2014), https://www.aclu.org/criminal-law-reform/coalition-including-aclu-asks-defense-secretary-moratorium-1033-program-militari#3.

116 DEF. LOGISTICS AGENCY, *supra* note 39, at 6-8.

The concern for Presidential abuse of the wide discretion granted by the 2006 Amendments has been overstated and should not be a concern. The President has numerous powers that can and do allow him the same power as would be given to him by the 2006 Amendments.[117] An executive order, for example, grants the President unlimited power if he so desires. However, the Presidential check on protecting state sovereignty, for both political and constitutional reasons, has prevented the President from overstepping these bounds.

Therefore, the most efficient way of protecting this nation from current national threats, such as terrorism, is for the Federal Government to ensure those weapons are actually available if the threat materializes by maintaining control over the weapons.

CONCLUSION

The separation of military forces from civil law enforcement has been a fundamental principle of the United States of America dating back to the very foundation of the country. Through the Posse Comitatus Act, Congress sought to ensure that this division remained a permanent part of the country's future as well. The recent implementation of the DOD 1033 Program, however, erodes this separation by militarizing America's civil law enforcement agencies.

Although the DOD 1033 Program's original purpose of combating terrorism and drug smuggling could have been implemented without violating the Posse Comitatus Act, the way the DOD 1033 Program has been used in practice contravenes the separation mandated by the Posse Comitatus Act. The DOD 1033 program has attempted to side-step the Posse Comitatus Act by providing local law enforcement agencies with the tools that make them indistinguishable from the United States Armed Forces. The supply of weapons allows law enforcement agencies to use military-grade force and coercion over its citizens without any type of oversight and accountability.

The DOD 1033 Program is not only illegal but also inefficient. The DOD 1033 Program's intentions were that the law enforcement agencies would use these weapons for emergencies, counterterrorism, and counterdrug purposes. However, due to the lack of oversight and accountability, law enforcement agencies are using brand-new, expensive equipment in situations that require nothing more than standard police-issue weapons. This misuse of weapons creates the possibility of law enforcement agencies no longer having the means necessary to protect their citizens should emergencies arise.

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[117] Beckler, *supra* note 112, at 30-31.

The DOD 1033 Program must be withdrawn and replaced by the Insurrection Act Amendments of 2006, not only to prevent violations of the Posse Comitatus Act but also to protect our nation from threats.

CHILD SEX TRAFFICKING: LAW AND ECONOMICS PERSPECTIVE

Jesse Hong[*]

INTRODUCTION

Debra Palmer's teenage daughter had her own website: "Mistress Alisha."[1] Palmer's boyfriend managed the website as a part of their illicit bondage domination sadism masochism (BDSM) business, through which they sold the child's online and in-person BDSM services.[2] The child had been trained to become a dominatrix by the boyfriend since she was twelve, with Palmer's aid.[3] Both Palmer and her boyfriend were convicted for commercial sex trafficking of a child and received fifteen to twenty-five years in jail, along with an order to pay restitution.[4] Though the government asked the court to order $1 million in restitution based on an expert's assessment, the judgment came down to only $200,000.[5] But, in reality, because of the defendants' indigency, the final order was limited to quarterly payments of twenty-five dollars or ten percent of the defendants' earnings during their sentence, and one hundred dollars or ten percent of the defendants' earnings after their release.[6] At the end, the child was left without family support or any resources, and could not even afford a therapy session that she desperately needed.[7]

Although this may sound like something that can happen to a very few, if any, children in the United States, 83 percent of all trafficking victims in the United States are Americans and the average age of the victims is thirteen years old in the United States.[8] In fact, North Dakota has recent-

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1 United States v. Palmer, 643 F.3d 1060 (8th Cir. 2011).

2 *Id*. at 1063 (BDSM activities include "bondage, beatings, burnings, and genital mutilations").

3 *Id*.

4 *Id*.

5 *Id*. at 1064.

6 *Id*.; *see also* United States v. Lewis, 791 F. Supp. 2d 81, 92-94 (D.C. Cir. 2011) (finding the defendant guilty of trafficking four teenage girls, the court ordered restitution totaling almost $4 million, but was only able to locate and forfeit $12,045 despite the fact that the defendant was estimated to have gained $980,860 through the victims' labor).

7 *Id*.

8 Michelle Fox, *Dark side of ND oil boom: Sex trafficking*, CNBC.COM (Mar. 12, 2015, 6:47 PM ET), http://www.cnbc.com/2015/03/12/dark-side-of-nd-oil-boom-sex-trafficking.html.

ly seen an extreme case of burgeoning sex trafficking industry following the oil boom.[9] The growth in the number of young, unaccompanied men working high-paying hydraulic fracturing ("fracking") jobs created an ideal "market" for sex trafficking, which caused traffickers from outside to relocate to "supply a booming demand in the 'market'" in a small town in North Dakota.[10] With the aid of an online classified website such as Backpage.com serving as the Internet prostitution marketplace,[11] these traffickers are also known to engage in other organized criminal activities including drug trafficking and gunrunning.[12] In fact, North Dakota has seen 19.5 percent increase in drug crimes from 2012 to 2013[13] in addition to the "infestation" of sex trafficking.[14] To combat these issues in North Dakota, the state legislature enacted tougher human trafficking laws in mid-2015[15] and the federal government awarded $1.5 million to fund anti-trafficking efforts in the state in late-2015 to fund trafficking victim support centers similar to the one established in Minnesota,[16] which will be discussed in Part II-D.

The problems faced by sex trafficking victims are multi-fold. First, the crime itself is often "overlooked, misunderstood, and unaddressed," which renders detecting the problem more difficult.[17] Second, the court often fails to award proper restitutions as required by the law.[18] Lastly, even in those rare cases where the victim is awarded restitution, most victims do not benefit from the money judgment because the incarcerated traffickers often do not have any assets. With these issues in mind, this com-

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9 *Booming Oil Fields May Be Giving Sex Trafficking A Boost*, NPR.ORG (Feb. 2, 2014, 12:00 AM ET), http://www.npr.org/2014/02/01/265698046/booming-oil-fields-may-be-giving-sex-trafficking-a-boost.

10 Amy Dalrymple & Katherine Lymn, *Sex for sale in the Bakken: N.D. trafficking on the rise*, Billings Gazette (Jan. 4, 2015), http://billingsgazette.com/news/state-and-regional/montana/sex-for-sale-in-the-bakken-n-d-trafficking-on/article_67df4f33-425c-5941-894d-f1c279e5af5d.html.

11 *Id.*

12 *Id.*; Fox, *supra* note 8.

13 Dalrymple & Lymn, *supra* note 10.

14 Fox, *supra* note 8.

15 Amy Dalrymple, *Tougher North Dakota human trafficking laws take effect today*, Inforum.com (Aug. 1, 2015, 4:30 AM), http://www.inforum.com/news/3808901-tougher-north-dakota-human-trafficking-laws-take-effect-today.

16 Amy Dalrymple, *Feds award $1.5 million to help human trafficking victims in North Dakota*, GRAND FORKS HERALD (Sep. 24, 2015, 10:30 PM), http://www.grandforksherald.com/news/crime-and-courts/3846757-feds-award-15-million-help-human-trafficking-victims-north-dakota.

17 COMM. ON THE COMMERCIAL SEXUAL EXPLOITATION AND SEX TRAFFICKING OF MINORS IN THE UNITED STATES, BD. ON CHILDREN, YOUTH, AND FAMILIES, COMM. ON LAW AND JUSTICE, INST. OF MED. & NAT'L RES. COUNCIL OF THE NAT'L ACADEMIES, CONFRONTING COMMERCIAL SEXUAL EXPLOITATION AND SEX TRAFFICKING OF MINORS IN THE UNITED STATES 19 (The National Academies Press 2013) [hereinafter NAT'L ACADEMIES PRESS].

18 *See generally* Alexandra F. Levy, Martina E. Vandenberg, & Lyric Chen, *When "Mandatory" Does Not Mean Mandatory: Failure to Obtain Criminal Restitution in Federal Prosecution of Human Trafficking Cases in the United States*. THE HUMAN TRAFFICKING PRO BONO LEGAL CENTER (Sep. 30, 2014), http://www.htprobono.org/htprobono-mandatory-restitution-report-9-2014/.

ment will examine the issue of sex trafficking, with a focus on those who are forced into the sex trade before the age of 18. In particular, this comment will borrow Law and Economics concepts to assess the current status of sex trafficking of minors in the United States and review the existing empirical studies on the cost and benefit of implementing effective prevention and intervention programs, and explain why it is necessary to more proactively provide support for the victims through systematic, interdisciplinary efforts, given the shortfalls of the existing statutes.

Part I of this comment will provide general background, encompassing definition of trafficking and importance of defining the scope of the subject. Then, Part II will review the basic Law and Economics concepts that will help defining the problem, and review the existing empirical studies to estimate the magnitude of the sex trafficking industry, expected costs of sex trafficking, and benefits of implementing preventive measures against sex trafficking. In Part III, the potential impact of current restitution provisions and other relevant area of laws—prostitution in particular—have on sex trafficking will be discussed.

I. BACKGROUND

A. *Trafficking in Persons: Defining Features & Characteristics*

Trafficking in persons is a modern analogue of the institution of slavery, which goes back as far as the human history.[19] In contrast to the universal condemnation of slavery, however, trafficking in persons has only been addressed at the international level during the early 2000s.[20] In its earliest effort to address the issue, the United Nations identified three distinct elements: the act, the means, and the purpose.[21] According to this def-

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19 KEITH BRADLEY & PAUL CARTLEDGE, THE CAMBRIDGE WORLD HISTORY OF SLAVERY: VOLUME 1, THE ANCIENT MEDITERRANEAN WORLD (2011) (explaining that slavery has been one of "the most ubiquitous of all human institutions, across time and place, from earliest history until, some would argue, the present day").

20 UNITED NATIONS OFFICE ON DRUGS AND CRIME, GLOBAL REPORT ON TRAFFICKING IN PERSO NS (2012) [hereinafter GLOBAL REPORT] (explaining the disparate treatment of trafficking in persons across nations, as some countries have not implemented legislation addressing the problem and/or failed to enforce such legislation).

21 PROTOCOL TO PREVENT, SUPPRESS AND PUNISH TRAFFICKING IN PERSONS, ESPECIALLY WOM EN AND CHILDREN, SUPPLEMENTING THE UNITED NATIONS CONVENTION AGAINST TRANSNATIONAL ORGANIZED CRIME (2000) [hereinafter U.N. PROTOCOL] (effective as of December 25, 2003, the U.N. Protocol defines "trafficking in persons" as: "[the *act* of] recruitment, transportation, transfer, harbouring or receipt of persons, by *means* of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the *purpose* of exploitation.") (emphasis added).

inition, "the act" encompasses not only active recruitment and transportation, but also the act of harboring and receiving of the trafficked persons, while "the means" addresses a broad spectrum of behaviors, including but not limited to: the use of threat, force, coercion, fraud, deception, monetary payment, and/or intangible benefits.[22] Notably, "the purpose" is broadly defined as exploitation, prescribing only the minimum to be included, leaving the outer boundaries open.[23] As such, the U.N. Protocol was not meant to be exhaustive and certainly does not prohibit the Member States from adopting a lower mental element.[24]

Moreover, the Protocol mandates the Member States to make any manifestation of the intention to exploit punishable, regardless of whether the actual exploitation took place.[25] Because the Protocol does not require the means element in cases involving individuals under the age of eighteen,[26] anyone who commits one of the constituent acts to exploit a child is punishable according to the Protocol.[27]

Ratified by 169 nations,[28] the Protocol recognizes the global and complex nature of trafficking in persons and the importance of taking concurrent national and international approaches to understand and combat the problem.[29] While the international approach can be effective in devising uniform policies and cooperative strategies necessary to prevent and address transnational trafficking cases, considering the high rate of within-the-border trafficking cases[30] and the difficulty of obtaining reliable official statistics,[31] this comment will pursue the route of narrowing the scope to

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22 *Id.*

23 U.N. PROTOCOL, *supra* note 21, Art. 3 ("Exploitation shall include, *at a minimum*, the exploitation of the prostitution of others or other forms of sexual exploitation, forced labour or services, slavery or practices similar to slavery, servitude or the removal of organs.") (emphasis added).

24 UNODC, *Module 1: Definitions of trafficking in persons and smuggling of migrants* 6 (2009).

25 *Id.*; U.N. PROTOCOL, *supra* note 21, Art. 5.

26 U.N. PROTOCOL, *supra* note 21, Art. 3(c).

27 *Module 1: Definitions of trafficking in persons and smuggling of migrants* 6 (2009).

28 United Nations, *Treaty Series*, vol. 2237, p. 319 (status as of Feb. 12, 2016), https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XVIII-12-a&chapter=18&lang=en.

29 GLOBAL REPORT, *supra* note 2, at 16.

30 Fox, *supra* note 8; *Human Trafficking A Problem Within U.S. Borders*, NPR.ORG (May 13, 2010, 2:05 PM ET), http://www.npr.org/templates/story/story.php?storyId=126797963; Heather J. Clawson, Nicole Dutch, Amy Solomon, & Lisa Goldblatt Grace, *Human Trafficking Into and Within the United States: A Review of the Literature*, Office of the Assistant Secretary for Planning and Evaluation, U.S. Dep't of Health & Human Services (Aug. 30, 2009), http://aspe.hhs.gov/basic-report/human-trafficking-and-within-united-states-review-literature.

31 GLOBAL REPORT, *supra* note 2, at 16-17 (explaining official statistics only represent "the tip of the iceberg"); SIDDHARTH KARA, SEX TRAFFICKING: INSIDE THE BUSINESS OF MODERN SLAVERY (2009) (based on the statistics available, the author estimated that only 3 to 4 percent of trafficking cases have been prosecuted from 2001 to 2005).

understand the manifestations in the United States in an effort to estimate the extent of the problem more precisely.

B. *Trafficking Laws in the United States*

The United States Code has long provided different general provisions applicable to sex trafficking cases: 18 U.S.C. §§ 1591, 2422, and 2423. However, one of the most remarkable legislative milestones was achieved with the passage of the Trafficking Victims Protection Act of 2000 (TVPA)[32] that largely reflected the U.N. Protocol definition of trafficking in persons. Recognizing trafficking in persons as "a contemporary manifestation of slavery whose victims are predominantly women and children," Congress sought to penalize traffickers and protect the victims through the passage of TVPA.[33]

As amended by the William Wilberforce Trafficking Victims Protection Reauthorization Act of 2008 (TVPRA),[34] 18 U.S.C. § 1591 criminalizes anyone who (1) "recruits, entices, harbors, transports, provides, obtains, or maintains by any means a person;" or (2) "benefits, financially or by receiving anything of value, from participation in a [trafficking] venture."[35] In other words, TVPA penalizes not only the direct participants, but also applies broadly to the beneficiaries of the sex trafficking, provided that either they knew or recklessly disregarded the fact that "means of force, threats of force, fraud, coercion . . . will be used to cause the person to engage in a commercial sex act, or that the person has not attained the age of 18 years and will be caused to engage in a commercial sex act."[36] As such, both the U.N. Protocol and the U.S. Code treat the victim's age as a strict liability element,[37] recognizing the unique vulnerability of these populations.

In fact, TVPA goes even further than the U.N. Protocol in that it only requires proof of knowledge, while the Protocol requires the act to be "committed intentionally"[38] and for the "purpose of exploitation."[39] In con-

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32 Trafficking Victims Protection Act, Pub. L. No. 106-386, 114 Stat. 1464 (2000) (codified as amended at 22 U.S.C. §7101 *et seq.* (2015)).

33 22 U.S.C. § 7101(a) (2000).

34 William Wilberforce Trafficking Victims Protection Reauthorization Act of 2008, Pub. L. No. 110-457, 122 Stat. 5044 (2008).

35 18 U.S.C. § 1591(a)(2).

36 *Id.*

37 U.N. PROTOCOL, *supra* note 21, Art. 3 (Subsection (d) defines "child" as "any person under eighteen years of age" and (c) construes the "recruitment, transportation, transfer, harbouring or receipt of a child for the purpose of exploitation" as "trafficking in persons" per se in the absence of any coercive measures).

38 U.N. PROTOCOL, *supra* note 21, Art. 5.

39 U.N. PROTOCOL, *supra* note 21, Art. 3(a).

trast, under TVPA, as long as the trafficker had a "reasonable opportunity" to observe the victim,[40] the trafficker's actual knowledge of the victim's age is irrelevant. Therefore, in cases involving victims under the age of eighteen, the prosecution only needs to show that the person participated in the sex trafficking venture with knowledge of or in reckless disregard for the fact that the minor victim would be subjected to commercial sexual exploitation.

Predating TVPA's enactment, other sections on transportation of minors[41] and coercion and enticement[42] have been used to prosecute traffickers of minors with minimal success.[43] While these provisions are still in effect and considered to be distinguishable from the provision on sex trafficking of children,[44] the latter has proven to be much more effective than the former in prosecuting traffickers.[45] In its TVPA ten-year anniversary report, the Department of Justice reported substantial increases in the number of federal prosecutions brought by the Civil Rights Division and U.S. Attorney's Offices.[46] According to the report, compared to 18 cases during the 5 years preceding the TVPA (1996-2000), the number of prosecutions jumped to 92 cases in the 5 years following the TVPA (2001-2005), and again more than doubled, totaling 199 cases in the next 5 year period (2006-2010).[47] In addition to these, the Innocence Lost National Initiative, a partnership between the Department of Justice Child Exploitation and Obscenity Section, the FBI's Crimes Against Children Unit, and the National Center for Missing and Exploited Children, has resulted in the rescue of 4800 children and conviction of more than 2000 traffickers and facilitators over the 10 years of its existence.[48] While these numbers represent a great ad-

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40 18 U.S.C. § 1591(c).

41 18 U.S.C. § 2423(a) (criminalizing anyone "who knowingly transports an individual who has not attained the age of 18 years in interstate or foreign commerce . . . with intent that the individual engage in prostitution, or in any sexual activity for which any person can be charged with a criminal offense").

42 18 U.S.C. § 2422(b) (criminalizing "[w]hoever, using the mail or any facility or means of interstate or foreign commerce, . . . knowingly persuades, induces, entices, or coerces any individual who has not attained the age of 18 years, to engage in prostitution or any sexual activity for which any person can be charged with a criminal offense, or attempts to do so").

43 UNITED STATES DEP'T OF JUSTICE CIVIL RIGHTS DIV., REPORT ON THE TENTH ANNIVERSARY OF THE TRAFFICKING VICTIMS PROTECTION ACT (2010) [hereinafter TENTH ANNIVERSARY REPORT].

44 *See* U.S. v. Brooks, 610 F.3d 1186, 1195 (9th Cir. 2010) (holding that the statutes are distinguishable due to the different requirements—knowledge in § 1591(a) and intention in § 2423(a)—and that a trafficker can be indicted for both under certain circumstances).

45 TENTH ANNIVERSARY REPORT, *supra* note 43, at 5.

46 *Id.* at 6.

47 *Id.*

48 Federal Bureau of Investigation, *Violent Crimes Against Children: Innocence Lost* (Oct. 2015), http://www.fbi.gov/about-us/investigate/vc_majorthefts/cac/innocencelost (Innocence Lost was established in June 2003 and the statistics represent the number as of October 2015).

vance made possible by the enactment of the TVPA and attest to the improvement, it is still a small portion of the trafficking cases.

In addition to its broader applicability[49] and higher minimum sentence requirement,[50] the TVPA also features mandatory restitution provisions[51] and two-level sentence enhancement,[52] which give the prosecution more ammunition. However, in light of the cases where the victims could not benefit from the judgment due to the defendants' indigency, the next Part will assess the adequacy of the current system and estimate the economic ramifications of sex trafficking by adopting basic Law and Economics concepts.

II. LAW AND ECONOMICS PERSPECTIVE: DEFINING THE PROBLEM

A. *Basic Concepts*

Law and Economics movement in the United States is traceable to the Progressive Era, dating from 1890 to 1920.[53] Employing the assumptions and methodologies of economics, Law and Economics focuses on how economic incentives shape the participant behaviors and studies the interaction between economics, law, and policy.[54] Within the realm of Law and Economics, however, there exist many different schools of thought. For example, one end of such spectrum concerns economic efficiency as "the *exclusive* goal of legal policy," [55] whereas the other end gravitates toward distributional concerns.[56] Though it is possible to focus specifically on the "economic analysis of law" rooted in efficiency rationale,[57] the more commonly used approach is broader in its scope, concerning itself with the limits of economic analysis in policymaking and finding the balance between efficiency and distributional concerns.[58] While the ultimate goal may differ depending on one's theoretical orientation or perspective, however, the main objective of Law and Economics can be summarized as follows: to determine the effects of actual legal rules ("positive" branch) and the most

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49 18 U.S.C. §1591(a)(1)-(2) (2015).

50 18 U.S.C. §1591(b) (2015).

51 18 U.S.C. §1593 (2008).

52 U.S.G.G. § 2G1.3(a)-(b) (2015).

53 *See generally* Herbert Hovenkamp, *Law and Economics in the United States: a brief historical survey*. 19 CAMBRIDGE J. ECON. 331 (1995).

54 *Id.*

55 *Id.* at 332 (citing RICHARD POSNER, ECONOMICS OF JUSTICE (1981)).

56 Hovenkamp, *supra* note 53, at 332-33.

57 RICHARD POSNER, ECONOMIC ANALYSIS OF LAW (1992).

58 Hovenkamp, *supra* note 53, at 332-33.

efficient legal rules ("normative" branch).[59] As such, the two-fold objective of Law and Economics approach requires examining what is and what ought to be. With these principles in mind, the next part will examine the economic incentives motivating the sex traffickers ("positive" approach) and the cost and benefit of implementing an effective comprehensive trafficking victim support system ("normative" approach) by reviewing some empirical studies adopting basic cost-benefit analysis.

B. *Supply, Demand, and Commodification of the Human Subjects*

Before examining the economics of illegal sex trafficking market, it may be instructive to examine how the legal labor market functions and distinguish how the two differ. Put simply, in a legal labor market, a laborer voluntarily chooses to give up his time to become a supplier in the labor market: he would try to maximize his wellbeing by weighing different factors, including compensation, the utility of foregone activities, and other personal characteristics.[60] In other words, individuals use available information, compare costs and benefits, and make a "rational" choice to achieve the highest level of wellbeing.[61] Depending on the quantity of supply and demand, the market price will adjust to reflect the current status of the market, and any marginal supplier or employer will enter or exit the market accordingly.[62] As such, the defining characteristic of a legal labor market is the individuals' agency, or the personal decision-making ability, according to which he may make a rational choice to maximize his wellbeing or profit.[63]

In the context of the illegal sex trafficking trade, however, this sense of agency is either severely limited or entirely absent from the supply side, thus resulting in "commodification" of the human subjects trafficked.[64] Such commodification follows from the trafficker's economic incentives as an intermediary between the labor supplied by the vulnerable populations and demand created by the purchasers.[65] The traffickers' incentives are twofold: first, unlike voluntary supplies existing in the legal labor market, the traffickers as intermediaries do not internalize the production costs (e.g.,

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59 *Id.* (though the history of Law and Economics in the United States seems incomplete without the discussion of the Coase Theorem in the 60s, the fundamental assumptions of the theorem (i.e., role of transaction costs and voluntary transaction) is incompatible with the sex trafficking trade and largely irrelevant to the discussion).

60 *See generally* Elizabeth M. Wheaton, Edward J. Schauer & Thomas V. Galli, *Economics of Human Trafficking*, 48 INT'L MIGRATION 114 (2010).

61 *Id.* at 117.

62 *Id.* at 126.

63 *Id.* at 120-21.

64 *Id.* at 122.

65 *Id.* at 117.

laborer's time spent working or other foregone opportunities);[66] second, the perceived and/or actual risks of being caught for human trafficking are very low,[67] making the prospect or expected gain even greater and more attractive.

This pattern of perverse incentives is very similar to those found in prostitution. That is, the lack of internalization of production costs changes the extent to which the economic incidence of criminalization affects the traffickers, making their supply more elastic.[68] In other words, the nature of the trafficking industry makes the traffickers inherently more responsive to the changes in demand on the one hand, and on the other, the perceived or actual risks of being involved in the industry. That being said, whereas the driving force of the trade is easy to grasp, it is difficult to understand exactly what the sex trafficking industry is costing society at large, which may explain the relative lack of systematic empirical studies on the subject.[69] While the difficulties arising from the furtive nature of the sex trade is beyond the scope of this comment, reviewing the available empirical literatures in light of the existing legal framework may provide valuable insights into the extent of costs as the victims try to deal with the devastating impacts it leaves behind and benefits we can derive from instituting a more effective and systematic victim support system.

C. *Cost-Benefit Analysis*

There have been numerous studies that tried to gauge the extent of the sex trafficking industry. However, many commentators have questioned the reliability of the existing empirical data and pointed out the methodological issues, including different operational terminologies and parameters used in these studies.[70] In addition to these technical difficulties, the fact

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66 Samuel Lee & Petra Persson, *Human Trafficking and Regulating Prostitution* (New York University Law and Economics Working Papers, No. 299, 2015), http://lsr.nellco.org/cgi/viewcontent.cgi?article=1303&context=nyu_lewp.

67 *Id.*; SIDDHARTH KARA, SEX TRAFFICKING: INSIDE THE BUSINESS OF MODERN SLAVERY 40 (2009) (estimating, based on the existing statistics, that only 2 to 3 percent of traffickers are prosecuted); Wheaton, Schauer & Galli, *supra* note 60, at 3.

68 Lee & Persson, *supra* note 66, at 3.

69 Elżbieta M. Goździak, *Human Trafficking in the United States: Knowledge gaps and research priorities*, *in* HUMAN TRAFFICKING: NEW DIRECTIONS FOR RESEARCH 153, 154-55 (International Organization for Migration 2009), https://www.iom.int/jahia/webdav/shared/shared/mainsite/microsites/IDM/workshops/ensuring_protection_070909/human_trafficking_new_directions_for_research.pdf.

70 *See id.* at 160-62 (highlighting the dangers of using "small convenience samples" and relying uncritically on poorly-conducted interviews that were more like anecdotes); Anthony Marcus, Amber Horning, Ric Curtis, Jo Sanson & Efram Thompson, *Conflict and Agency among Sex Workers and Pimps: A Closer Look at Domestic Minor Sex Trafficking*, 653 THE ANNALS OF THE AM. ACAD. OF POL. & SOC. SCI. 225, 226 (2014); Michelle Stransky & David Finkelhor, *How Many Juveniles are Involved*

that many applicable criminal provisions exist at both federal and state levels makes determining the number of cases unavoidably imprecise.[71] Other factors compound the difficulties of obtaining reliable data and create an immense variation in the estimation, which may be responsible for the lack of understanding at large.[72]

Some of these other factors are found before the commencement of victimization, which may have contributed to the likelihood of being victimized, while others result from the victimization and persist throughout the victim's lives beyond the immediate aftermath. Specifically, at the individual level, trafficking victims tend to be more vulnerable to exploitation in general because they have a history of neglect or abuse, institutionalization, or are currently homeless, runaways, or so-called thrown-away children (i.e., asked or forced to leave home).[73] At the community level, the absence of established protocols specific to dealing with minor sex workers has aggravated the victims' distrust of law enforcement and stigmatization of the victims as criminals, exacerbating the under-reported and marginalized nature of the crime.[74] While a comprehensive solution to the problem should ideally address the risk factors that make these victims more likely the target of the traffickers and therefore should focus on preventing them from being pulled into the trade from the beginning, the assessment of these factors have long been addressed in other social science fields,[75] thus it is

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in Prostitution in the U.S.? (Crime Against Children Research Center 2008), http://www.unh.edu/ccrc/prostitution/Juvenile_Prostitution_factsheet.pdf (concluding existing estimates as "mostly educated guesses or extrapolations based on questionable assumptions"); Megumi Makisaka, *Human Trafficking: A Brief Overview* 4 (World Bank, Social Development Notes: Conflict, Crime and Violence, 2009), http://siteresources.worldbank.org/EXTSOCIALDEVELOPMENT/Resources/244362-1239390842422/6012763-1239905793229/Human_Trafficking.pdf.

71 U.S. DEP'T OF JUSTICE, THE NATIONAL STRATEGY FOR CHILD EXPLOITATION PREVENTION AND INTERDICTION: A REPORT TO CONGRESS 33 (2010), http://www.justice.gov/sites/default/files/psc/docs/natstrategyreport.pdf [hereinafter A REPORT TO CONGRESS].

72 NAT'L ACADEMIES PRESS, *supra* note 17, at 48.

73 NAT'L ACADEMIES PRESS, *supra* note 17, at 2, 20, 85-86; *see also* A REPORT TO CONGRESS, *supra* note 71, at 35.

74 NAT'L ACADEMIES PRESS, *supra* note 17, at 20, 102, 255, 288; *see also* A REPORT TO CONGRESS, *supra* note 71, at 34 (explaining that the exploited child victims are much more likely to be arrested for prostitution offenses than are their client offenders); *see* discussion *infra* Part III.A.

75 *See generally* Mazeda Hossain et al., *The Relationship of Trauma to Mental Disorders Among Trafficked and Sexually Exploited Girls and Women*, 100 AM. J. OF PUBLIC HEALTH 2442 (2010); Kevin Lalor & Rosaleen McElvancey, *Child Sexual Abuse, Links to Later Sexual Exploitation/High-Risk Sexual Behavior, and Prevention/Treatment Programs*, 11 TRAUMA VIOLENCE ABUSE 159 (2010); Kimberly J. Mitchell, David Finkelhor & Janis Wolak, *Risk Factors for and Impact of Online Sexual Solicitation of Youth*, 285 J. AM. MED. ASS'N 3011 (2001); John F. Knutson, *Psychological Characteristics of Maltreated Children: Putative Risk Factors and Consequences*, 46 ANNUAL REVIEW OF PSYCHOLOGY 401 (1995); Tamerra P. Moeller, Gloria A. Bachmann & James R. Moeller, *The Combined Effects of Physical, Sexual, and Emotional Abuse During Childhood: Long-Term Health Consequences for Women*, 17 CHILD ABUSE & NEGLECT 623 (1993).

more conducive for our purposes to focus specifically on the aftermath of the victimization.

Victims of sex trafficking suffer from many short-term and long-term damages similar to those experienced by the victims of child abuse and sexual exploitation in general as trafficking almost always entails a combination of physical and sexual exploitations.[76] And for those who are forced into the trade at an early age, the damages are bound to be more extensive both due to their vulnerability at the time of the offense and also relatively longer expectation of life left ahead. As such, the costs related to these cases extend far beyond the victim's immediate surroundings.

One empirical study has provided an itemized list of direct and indirect costs for child abuse victims based on the Fourth National Incidence Study[77] and other studies from the social science field.[78] Derived from the number of reported victims and case studies, the authors identified the following as direct and indirect costs and estimated what child abuse costs the society:[79]

76 *See generally* Neha A. Deshpande & Nawal M. Nour, *Sex Trafficking of Women and Girls*, 6 REV. OBSTETRICS & GYNECOLOGY 22 (2013).

77 *See generally* NAT'L CTR. ON CHILD ABUSE AND NEGLECT, U.S. DEP'T OF HEALTH & HUMAN SERV., FOURTH NATIONAL INCIDENCE STUDY OF CHILD ABUSE AND NEGLECT (NIS-4) (2010).

78 *See generally* Gelles & Perlman, *supra* note 76.

79 *Id.* at 3-6.

Direct Costs		Indirect Costs	
Hospitalization/ Acute Medical Treatment	$2,907,592,094	Special Education	$826,174,734
Mental Health Care	$1,153,978,175	Juvenile Delinquency	$3,416,149,283
Child Welfare System	$29,237,770,193	Mental Health and Health Care	$270,864,199
Law Enforcement	$34,279,048	Adult Criminal Justice System	$32,724,767,699
		Homelessness	$1,606,866,538
		Lost Productivity	$7,834,164,589
		Early Intervention	$247,804,537
Total Direct Costs	**$33,333,619,510**	**Total Indirect Costs**	**$46,926,791,578**

Table 1: Estimation of the total costs of child abuse[80]

In addition to these costs, the Center for Disease Control's recent report noted that once you account for the lost productivity caused by abuse-related deaths, the total costs in the United States alone amounted to $124 billion.[81] While these figures speak volumes about the magnitude of the problems involving child victims and provide some rough assessment of the extent of the problems, they fall short of providing "normative" answer to

80 Reproduced from the data in Richard J. Gelles & Staci Perlman, *Estimated Annual Cost of Child Abuse and Neglect* 3-6 (Prevent Child Abuse America 2012).

81 Xiangming Fang, Derek S. Brown, Curtis S. Florence, James A. Mercy, *The Economic Burden of Child Maltreatment in the United States and Implications for Prevention*, 36 Child Abuse & Neglect 156, 161 (2012), http://www.sciencedirect.com/science/article/pii/S0145213411003140.

these problems. Therefore, the following section will discuss some empirical data specifically focused on the cost and benefit of implementing an intervention program by reviewing one actual early intervention program instituted in Minnesota[82] to provide a realistic estimation of administering effective support program and assessment of the efficiency of systemic efforts. Notably, limiting the benefits to the avoided harms will give a lower, albeit more realistic estimate because some of the harms are irreversible and taking all of the costs that would have otherwise incurred—akin to those listed in Table 1—under the "benefits" side will unrealistically assume that the trafficking never occurred.

D. *Existing Empirical Data*

According to the Minnesota study, which identified and analyzed 16 different harms and 5 main parameters, the early intervention program produced a return on investment of $34 in benefit for each $1 in cost.[83] The study predicted $58,229 savings per person for a cohort of 496—representing the estimated number of victims within the state of Minnesota—which translates into approximately $29 million savings in total in Minnesota.[84] Surprisingly, the study also found that even with their conservative estimation, the expenses incurred in prevention and early intervention programs will likely pay for itself within the first year of the program.[85]

Specifically, the study employed actual data from Ramsey County in Minnesota on the costs of running its intervention program—$2,500 to $3,000 per victim for its one-year intensive program—and the actual data on annual housing from the Minnesota Department of Human Services—approximately $900—to derive overall costs of the support program.[86] There are, however, two things that may require some caution in generalizing these data. First, the subject of this study was much broader than our focus as its programs were aimed at serving "at-risk" youths as well as those who traded sex or were forced into the sex trade. Second, and per-

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82 MINNESOTA INDIAN WOMEN'S RESOURCE CTR., EARLY INTERVENTION TO AVOID SEX TRADING AND TRAFFICKING OF MINNESOTA'S FEMALE YOUTH: A BENEFIT-COST ANALYSIS 8- 9 (2012), http://www.miwrc.org/wp-content/uploads/2013/12/Benefit-Cost-Study-Full.pdf [hereinafter A BENEFIT-COST ANALYSIS].

83 *Id.* (the harms were defined in terms of public spending, including: health and mental health outcomes, experience of violence and intimidation, homelessness, chemical dependency, unplanned pregnancy, involvement in criminal justice, decreased lifetime earnings, welfare expenditures, loss of human potential; the 5 main model parameters included: discount rate, program effectiveness, filtering efficiency, elasticity of demand and supply).

84 *Id.*

85 *Id.*

86 *Id.* at 54-57.

haps corollary to the first, because of its broader focus, the estimation of the intervention plan was geared towards addressing both intensive and less intensive cases, which probably skewed the result by underestimating the costs, as sex trafficking victims tend to land on the more severe side of the spectrum.

Given these caveats, it probably is too optimistic to expect the kind of savings predicted in the study in trafficking victims support programs. However, while it is true that administering effective and comprehensive support programs for trafficking victims will likely be more costly than the estimation derived from the Minnesota study, it is also equally true that the benefits flowing from the program will closely approximate or surpass those predicted in the study, as some of these avoidable harms are common to both sex trafficking victims and the "at-risk" youths, as listed below:

Public Health		**Criminal Justice**		**Other Expenditures**	
Major Injury	$38,508	Arrests	$13,176	Foregone Tax	$11,180
Minor Injury	$64,174	Court Hearings	$3,474	Foster Care	$95,628
PTSD	$5,900	Incarceration	$16,470		
STI	$1,334	Probation	$1,772		
Pregnancy	$28,345				
Chemical Dependency	$74,204				
Total Public Health	**$212,465**	**Total Justice**	**$34,892**	**Total Other**	**$106,808**

Table 2: Per individual expenditure over 12-year period[87]

87 A BENEFIT-COST ANALYSIS, *supra* note 82, at 48-50 (estimating the undiscounted 12-year values of harm to be $354,165, accounting for the likelihood and frequency of a certain kind of harm occurring).

Lastly, in construing the cost-benefit analysis, it is also important to accurately understand the overall extent and structure of the sex trafficking market in order to measure the actual costs and benefits attributable to its existence at the macro level. As seen in Table 3 below, according to one recent study that looked into the underground commercial sex trade in eight major cities in the United States and estimated weekly income per pimp in these cities, sex trafficking appeared to be an extremely profitable venture with virtually no upfront investment and little production costs for traffickers.[88] When compounded by the low risk of detection and the new technologies,[89] the relatively low opportunity cost for the trafficker himself[90] makes it hardly a difficult choice for the traffickers to be engaged as intermediaries.

City	Weekly Income	City	Weekly Income
Atlanta	$32,833	Miami	$17,741
Dallas	$12,025	San Diego	$11,129
Denver	$31,200	Seattle	$18,000
Kansas City	$5,000	Washington, DC	$11,588

Table 3: Estimation of weekly income per pimp in 8 major U.S. cities[91]

Given the magnitude of the ensuing harms, the cost of which will be borne by the system and taxpayers, as well as the irresistible financial incentives for the traffickers, it is clear that the heavy upfront costs for establishing the preventative measures and early intervention centers will be a small fraction of the costs that will follow from trafficking in the long run.

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88 *See supra* II.B for explanation of the basic economic concepts.

89 Meredith Dank, Bilal Kahn, P. Mitchell Downey, Cybele Kotonias, Deborah Mayer, Colleen Owens, Laura Pacifici, & Lilly Yu, THE URBAN INSTITUTE, ESTIMATING THE SIZE AND STRUCTURE OF THE UNDERGROUND COMMERCIAL SEX ECONOMY IN EIGHT MAJOR US CITIES (2014), http://www.urban.org/uploadedpdf/413047-underground-commercial-sex-economy.pdf.

90 This proposition is premised on 2 points: (i) the traffickers themselves do not have any other attractive alternatives that will generate equally generous amount of income; and (ii) the low rate of detection itself works as an incentive as the expected benefit for engaging in the trade is less affected by the discount rate.

91 *Id.*

III. CURRENT SOLUTIONS TO THE PROBLEMS

The solutions provided by the Law and Economics perspective are simple in theory: increased punishment will result in increased expected costs for the traffickers and reduced demand for trafficked humans.[92] However, as is true for many other issues, finding the optimal level of punishment and enforcement is not always easy in practice with other factors predicated on social and political mandates, which are properly the subjects of criminal justice literature. With that in mind, this section will examine the existing laws and solutions with a specific focus on sentencing structure and restitution provisions. This section will also briefly consider new developments in the trafficking law, as the TVPRA of 2005 was recently amended by Justice for Victims of Trafficking Act of 2015.[93]

A. *Addressing the Supply Side: Prosecution & Victim Protection*

Although it seems clear that the complexity of the trafficking phenomenon should never obscure the fact that the traffickers, not the child victims, are liable for the acts committed under the circumstances, regrettably, that is not always true in reality. Though the principle of non-punishment for the victims of sex trafficking has been explicitly iterated and reiterated on international and national levels,[94] unfortunately, in the United States, it is more likely that child victims of commercial sexual exploitation—which constitutes trafficking *per se* under §1591—will be arrested rather than the traffickers or the clients.[95] This is reflective of a larger trend: according to one study, the disproportionate arrest ratios ranged from six to eleven female prostitutes—including both adult and child—for each male client ("John") arrest in major U.S. cities in 2005.[96]

These numbers are alarming in and of itself, but the impact goes above and beyond the initial arrests. First, it should be noted that the process of

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92 Wheaton, Schauer, & Galli, *supra* note 60.

93 Justice for Victims of Trafficking Act of 2015, Pub. L. No. 114-22, https://www.congress.gov/bill/114th-congress/senate-bill/178.

94 U.N. High Comm'r for Human Rights, Econ. & Soc. Council, *Recommended Principles and Guidelines on Human Rights and Human Trafficking*, UN Doc. E/2002/68, Add. 1 (2002) (Recommended Principle 7 explains the rule as follows: "Trafficked persons shall not be detained, charged or prosecuted for the illegality of their entry into or residence in countries of transit and destination, or for their involvement in unlawful activities to the extent that such involvement is a direct consequence of their situation as trafficked persons"); *see also* Anti-Trafficking in Persons Act, Rep. Act 9208, § 17 (2003) (Phil.) (providing: "Trafficked persons shall be recognized as victims of the act or acts of trafficking and as such shall not be penalized for crimes directly related to the acts of trafficking . . . or in obedience to the order made by the trafficker in relation thereto.").

95 A REPORT TO CONGRESS, *supra* note 71, 34.

96 *Id.*

recovery for the trafficked children often consists of multiple steps that require cooperation across public and private sectors. Next, more often than not, these arrests are not due to the lack of proper legislation but rather the law enforcement officer's failure to identify these individuals as trafficked victims.[97] Because early identification of the victims is crucial to successful prosecution of the traffickers and protection of the victims from further traumatization, these arrests can contribute to the trafficking venture by fostering distrust of the system.

Although neither the U.N. Protocol nor the UNODC Model Law requires the inclusion of aggravating factors for child sex trafficking legislation, neither prohibits the individual Member States from electing to provide sentencing provisions that augment penalties for the aggravating circumstances.[98] In that aspect, the U.S. trafficking law goes further than what is required under the international standard in that the Federal Sentencing Guidelines provide enhanced sentencing under specific circumstances through the provisions proscribing sexual conduct involving a minor.[99] Certain characteristics, such as the existence of a special relationship and age of the victim, have been identified as factors warranting sentence enhancement to account for its impact on sex trafficking of a minor. In addition to laying down the minimum sentence required for sex trafficking of children, the Code also tiers the minimum years required according to the age of the victim: 10 years for victims between the ages of 14 and 18, 15 years for victims below the age of 14[100] with 8-level sentence enhancement for victims under the age of 12.[101] In cases where the defendants are convicted, these sentence-enhancing schemes have been applied consistently to ensure heavier sentences to reflect the nature of the offense.

The sentence enhancement provision also imposes a 2-level increase for any use of a computer or an interactive computer service,[102] which has been interpreted broadly to include recording of the illicit act or recruiting and grooming of the child victim. This provision reflects the widespread use of the new technologies in the recruitment, advertisement, and transaction of child sex trafficking.[103] Nowadays, more frequently than not, traffickers use these mediums to browse and recruit potential victims on social

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97 *See generally* A BENEFIT-COST ANALYSIS, *supra* note 82; A REPORT TO CONGRESS, *supra* note 71.

98 UNODC, *Model Law Against Trafficking in Persons* 38-39 (2009).

99 U.S.G.G. § 2G1.3(a)-(b).

100 18 U.S.C. § 1591(b).

101 U.S.G.G. § 2G1.3(b)(5).

102 U.S.G.G. § 2G1.3(b)(3).

103 UN Global Initiative to Fight Human Trafficking, *The Vienna Forum to Fight Human Trafficking* 13 (2008) ,http://www.unodc.org/documents/humantrafficking/2008/BP017TechnologyandHumanTrafficking.pdf.

networking websites and microblogs, and use online classified sections and specialized websites like Backdoor.com to advertise the victims' services.[104]

Furthermore, in addition to providing a broader pool of potential victims and ease of access, the information and communication technologies also facilitate anonymous financial transactions and quick conversion of the proceeds into legitimate assets. Taken together, the advancement in technologies makes trafficking more convenient, which is probably why even stricter sentencing scheme should be considered to address the matter more properly. This has become a widely publicized issue in the European Union, involving the retention of Internet Service Providers' retention of data and its constitutionality.[105] The United States has not taken similar approach to the subject to date.

Recently, Congress has amended the TVPRA of 2005 on its ten-year anniversary by adding a provision establishing the Domestic Trafficking Victims' Fund, which will be funded by the revenues from the additional assessment of $5,000 after the court-ordered fines on those who are convicted of trafficking among others.[106] These Funds will be exclusively reserved for health and medical care of trafficking victims.[107]

Also in the direction of correcting the deplorable circumstances surrounding the victims' arrests, Congress, as a part of this amendment under the Human Trafficking Survivors Relief and Empowerment Act of 2015, provided a way for the victims to move to vacate the previous arrest or conviction resulting from human trafficking and to protect the victims' identity in public and court records.[108] While these are small steps towards the victim-focused approach, it is certainly an admirable advancement in the right direction.

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104 *See* Dalrymple & Lymn, *supra* note 10; *Backpage Sex Trafficking*, THE HUFFINGTON POST, http://www.huffingtonpost.com/news/backpage-sex-trafficking/.

105 More specifically, the European Union has taken progressive steps toward retaining the traffic and location data under a data retention directive (EU Directive 2002/58/EC (Mar. 15, 2006)), which has been proven to be very helpful in investigating and prosecuting suspected trafficking cases (Evaluation on the Data Retention Directive, 22 (Apr. 18, 2011), http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2011:0225:FIN:en:PDF). However, the Directive has recently been held invalid by the European Court of Justice due to the extent of interference with the fundamental rights to privacy and confidentiality of communication (Court of Justice of the European Union, *The Court of Justice Declares the Data Retention Directive to be Invalid* (Apr. 8, 2014), http://curia.europa.eu/jcms/upload/docs/application/pdf/2014-04/cp140054en.pdf).

106 The list of offenses subject to the $5,000 additional assessment include: (i) peonage, slavery, and trafficking in persons; (ii) sexual abuse; (iii) sexual exploitation and other abuse of children; (iv) transportation for illegal sexual activity; or (v) human smuggling in violation of the Immigration and Nationality Act.

107 Justice for Victims of Trafficking Act of 2015, Pub. L. No. 114-22, § 101, https://www.congress.gov/bill/114th-congress/senate-bill/178.

108 Justice for Victims of Trafficking Act of 2015, Pub. L. No. 114-22, § 1002, https://www.congress.gov/bill/114th-congress/senate-bill/178.

B. *Addressing the Aftermath: Mandatory Restitution Provision*

Under the TVPA, restitution for the victims is mandatory in "the full amount of the victim's losses," which includes the greater of the value of the victim's services or the value of the victim's labor as guaranteed under the Fair Labor Standards Act.[109] However, according to one study that reviewed all human trafficking cases brought to the federal court between 2009 and 2012, only 36% of 306 federal indictments resulted in awarding "mandatory" restitution for the victim.[110] Notably, when the cases were divided into labor and sex trafficking, the disparity between the restitution outcomes was striking: while 94% (14 out of 16) of the labor trafficking victims received restitution, only 31% (52 out of 170) of the sex trafficking victims received restitution.[111] Given the differences between the numbers of labor trafficking and sex trafficking cases, it is probably difficult to attribute this disparate treatment to the nature of the charges. Rather, the differences may indicate that there is a certain blame-the-victim attitude prevalent in the administration of justice when it comes to the victims of sex trafficking.

Furthermore, the study also found that the average award for sex trafficking cases was significantly lower than labor trafficking cases.[112] These results are inexplicable for two reasons: (1) the TVPA explicitly mandates the court to order restitution for all that is required for the victim's rehabilitation and treatment; and (2) the provision requires the court to order "the greater" of the victim's services and minimum wages, and in most cases, the services of sex trafficking victims far exceed the federal minimum wages.[113]

C. *Addressing the Demand: Criminalization of Johns & Traffickers*

As the above-cited cases indicate,[114] in most cases, the victims are not vindicated when the traffickers are sentenced and the restitutions are ordered. More often than not, traffickers do not have sufficient assets to pay the victim in a lump sum amount and will not be able to make installment

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109 18 U.S.C. § 1593 (2008).

110 Levy, Vandenberg & Chen, *supra* note 18, at 3.

111 *Id.* at 9.

112 *Id.* (specifically, the average amount of award for sex trafficking victims was about a quarter of that awarded for labor trafficking victims when all cases were concerned; when only those cases in which the court actually awarded restitution, the average award amount was $228,201.82 for labor trafficking and $151,076.58 for sex trafficking).

113 *Id.*; *see also* THE URBAN INSTITUTE, supra note 89, at 30, 200 (estimation of weekly income per pimp in the major cities ranges from $5,000 to about $33,000; also the most common pricing scheme is by time increments, charging transactions in 15-minute, 30-minute, and 1-hour increment).

114 *See Palmer*, 643 F.3d at 1065; *see also Lewis*, 791 F. Supp. 2d at 92.

payment that will provide for the victim's recovery. Therefore, in such cases, it is imperative for the prosecution to go after the purchasers or "Johns." On a case-by-case basis, the TVPA has been interpreted broadly to apply to not only the suppliers, but also the purchasers of commercial sex acts with children.[115] Given the judiciary's reluctance to reward the proper amount of restitution for the victims of sex trafficking, however, the statute should be amended to clearly indicate such alternative routes of providing for the victims and promote consistent enforcement of the victim-centered approach. The nature of trafficking impels that both prosecution of the traffickers and protection of the trafficked victims be carried out concurrently to address the problem.

Lastly, many commentators have highlighted the beneficial impact that legalizing and licensing prostitution has on the enforcement of anti-trafficking laws.[116] Most of the comments trace these benefits to its practical impacts: differentiating voluntary from involuntary supply, accounting for the differences in the economic incidence of criminalization among the suppliers and victims, and the incumbent elasticity resulting from such uneven scale of criminalization.[117] While it certainly comes with its own costs, legalization of prostitution may bring the existing underground economy to light and can possibly help regulate the industry and curb the demand for trafficked victims by increasing the relative risks for Johns who forego the other legitimate alternatives.

CONCLUSION

As the existing empirical studies suggest, the damages borne by the victims of sex trafficking last long after the immediate harm is done. While the comprehensive approach should be focused on decreasing both supply and demand through increases in the severity and probability of the punishment, another approach focused on the aftermath of the sex trafficking, as explored in this comment, may provide more immediate and effective solution to the problem. First, in order to increase the probability of prosecution, more proactive intervention and investigative effort across the public and private sectors should be implemented. Second, establishing more concrete victim-focused support system through government-funded programs will help the victims of sex trafficking in a more substantive way than mandating restitution which turns out to be not mandatory after all. Lastly, and perhaps more importantly, the system should focus on the trafficking victims themselves and increase its efforts at reintegrating the victims into the

115 *See* United States v. Jungers, 702 F.3d 1066, 1075 (8th Cir. 2013).

116 *See* Lee & Persson, *supra* note 66; Marcus, Horning, Curtis, Sanson & Thompson, *supra* note 70, at 241-42.

117 *Id.*

society, not just as a moral crusade, but also as a way to enhance the efficiency of the system.