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Patent Politics

Michael H. Davis
Cleveland State University

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Davis: Patent Politics
PATENT POLITICS

MICHAEL H. DAVIS*

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I. INTRODUCTION

To observe that so-called intellectual property (IP)¹ flowered in the late twentieth century, even supplanting, to a large extent, the place of real and tangible personal property in terms of corporate, if not individual, wealth, is almost trite.²

* Professor of Law, Cleveland State University; patent attorney admitted to practice before the United States Patent and Trademark Office in patent cases. A grant from the Cleveland-Marshall Fund of the College of Law provided substantial support for this Article of both funding and patience, for which the author is deeply grateful. The author offers profound thanks to Dana Neacsu who read drafts when they were unreadable.

1. Because the status of patents and other protected intangibles as property is the issue in this discussion, the abbreviation "IP" represents the entire phrase, "so-called intellectual property," throughout this Article.

2. See Paula M. Rayman & Ann Bookman, *Creating a Research and Public Policy Agenda for Work, Family, and Community*, 562 ANNALS AM. ACAD. POL. & SOC. SCI. 191, 192 (1999) ("A current snapshot of our nation would reveal only 3 percent of the workforce employed in agriculture, with the majority of American workers employed in the service or high-technology sectors of the economy.");

Since IP has become the bedrock of most commercial wealth, especially in international trade,³ and since international trade is, or is about to become, the center of most commercially valuable trade,⁴ a comprehensive understanding of IP has become essential. Instead of being the reserve of technicians, the field demands a full examination by jurists and the larger society.

Although IP literature has blossomed, digesting its fruit is often difficult. This literature is available in two varieties: broad theoretical treatments so far removed from doctrine that its consumption seems to do more for the fruit than the palate, one might say, and narrow discussions of legal doctrine that have value only to the practitioner, if to anyone. This Article attempts to bridge that gap by showing the broad political significance of the otherwise narrow doctrine. Part II describes the inherent but largely unappreciated political nature of intellectual property judgments. Part III discusses the distinction between inventive and noninventive advances and challenges the assumption that the dividing line is rigid. Part IV explains the development of the “nonobviousness” inquiry, its reliance on the underlying hypothetical practitioner of ordinary skill, and the parallelism between the patent law inquiry and the vague and often uncertain professional standard and tort law’s reasonable man standard. Part V introduces the concept of the trump of property, a strategy of defining patents according to property law concepts far

Christopher M. Gacek, *U.S. Goals for Patent Protection in the GATT Trade Talks*, Heritage Foundation, at <http://www.heritage.org/Research/TradeandForeignAid/BG863.cfm> (Oct. 31, 1991) (“The past few decades have seen the United States move from an economy propelled by traditional manufacturing to one in which services and high technology are pre-eminent.”).

3. “Intellectual property is this nation’s greatest trade asset, returning a balance of trade to the U.S. economy greater than aircraft and agriculture.” Hilary Rosen, *Case Is About Creative Rights*, USA TODAY, Feb. 15, 2001, at 11A.

The essential feature that is new about the “New Economy” is its increased dependence on products and services that are the embodiment of ideas. . . . In each of these areas, the “product” or “service” is a piece of intellectual property—for example, a line of computer code, a new connecting device to make routers and servers more efficient, or new knowledge about genetic profiling that facilitates the use of gene therapy products to treat disease.

Robert Pitofsky, *Antitrust and Intellectual Property: Unresolved Issues at the Heart of the New Economy*, Remarks at the Antitrust, Technology and Intellectual Property Conference, Berkeley Center for Law and Technology, University of California, Berkeley (Mar. 2, 2001) (transcript available at <http://www.ftc.gov/speeches/pitofsky/ipf301.htm>).

According to a recent study, the products of digital technology—computing services, telecommunications, and consumer electronic products—now constitute the largest industry in the United States, ahead of construction, food products, and automotive manufacturing. In 1996, digital technology businesses generated 6.2 percent of the nation’s output of goods and services and employed nearly 4.3 million people. Sales in the field grew in the first six years of the 1990s by 57 percent, to a total value of \$866 billion.

Mary L. Azcuenaga, *Technological Innovation, International Trade and Competition Policy*, Remarks before the Japan Fair Trade Commission, 50th Anniversary Symposium, Tokyo, Japan (Dec. 1, 1997) (transcript available at <http://www.ftc.gov/speeches/azcuenaga/japan97.htm>).

4. See Alan S. Miller, *The Global Environment Facility and the Search for Financial Strategies to Foster Sustainable Development*, 24 VT. L. REV. 1229, 1230 n.9 (2000) (“From 1950 to 1998 world exports increased 17 times to \$5.4 trillion compared with a six-fold increase in global GNP.”).

removed from debates over the public interest in the issuance of patents. Part VI addresses the complications of the efforts to impose an international patent law system on countries of widely divergent cultures and values. Part VII concludes this Article, calling for a more complete understanding of patent law in order to facilitate more informed decisions in our own country and a critical assessment of internationalizing this area of law that reflects widely varied and deeply held political and cultural values around the world.

II. INTELLECTUAL PROPERTY: POLITICAL COMPONENTS

The political components of IP demand the most scrutiny. Unlike real property, IP, by virtue of its defining characteristic of intangibility, tends to defy casual observation. Tangible qualities typically characterize the ownership of physical property. Unlike the ownership of a valuable city block, or of an almost priceless diamond, the indicia of IP ownership remain invisible to specialists and ordinary citizens alike. More importantly, the political significance of exclusion from possession and enjoyment of real property is virtually as palpable as the property itself. Perhaps because of IP's intangibility, the political significance of exclusion from IP remains concealed and, as a result, frequently misunderstood. Most important, perhaps, the recognition of real property ownership rights tends to flow naturally and even intuitively from its real character. Almost no one except the specialist is even aware of the method of recognizing IP rights or the fact that such recognition actually creates rights of a truly counterintuitive character.

IP is a device by which the Patent and Trademark Office (PTO) and courts, through the conventional language of private property, regulate competition—a peculiarly public concern. This regulation of competition, the equivalent of a decision about the distribution of resources, involves an essentially political judgment regarding competing values: the consideration and resolution of competitive conditions.⁵ In other words, IP law, especially patent law, is a kind of disguised industrial policy. “[A]n intellectual property system is, in effect, a passive industrial policy.”⁶ It is “an industrial policy in today’s terms because it uses legal intervention to decide what technologies to promote. . . . And it chooses these technologies . . . through a set of prior rules”⁷ An IP system is simply an alternative “to a legislative approach [of] industry by industry subsidies or other market advantages”⁸ or to “subsidies, licensing, or similar interventionist policies”⁹ It is “a form of industrial policy and is therefore concerned with

5. See *infra* Part IV.

6. Robert M. Sherwood, *Human Creativity for Economic Development: Patents Propel Technology*, 33 AKRON L. REV. 351, 351 (2000). See also Michael H. Davis, *Some Realism About Indigenism*, 11 CARDOZO J. INT’L & COMP. L. 815, 830 (2003) (discussing whether IP can really protect the cultural intellectual products of Third World countries).

7. Kenneth W. Dam, *The Economic Underpinnings of Patent Law*, 23 J. LEGAL STUD. 247, 248 (1994).

8. *Id.* at 249.

9. *Id.* at 253.

R&D activities of firms and industries within the economy”¹⁰ While others have recognized that patent law is no more than industrial policy,¹¹ none have examined exactly where and how to manage and direct this industrial policy in the seemingly complex web of patent doctrine. The importance of this issue is not so much that patent law serves as a form of industrial policy, but that the Federal Circuit has taken “a narrow technical view . . . thereby masking the policy issues at stake.”¹² The danger is that the approach may “obscure the role of the patent system in a thicket of technical patent law rules unapproachable by those unskilled in that arcane art.”¹³

Consider briefly how a patent functions as a government-sponsored subsidy. An innovator¹⁴ must commonly introduce a product or process into the market, where others will be free to compete, forcing the innovator to lower prices to meet competition. Until competitors achieve full production and distribution, however, the innovator will have the opportunity to charge a higher price, and during that entry period—brief or long, depending upon what technical and economic barriers may obstruct the entry of others—the innovator can charge more than the ultimately competitive market price. Alternatively, the innovator can charge the competitive price during that entry period in order to create customer loyalty—a loyalty which, depending upon its developed strength, will serve as part of the barrier to entry for others. Nevertheless, the innovator will have to obtain enough profit to defray the original costs of research and development. If the competitive market price plus the

10. *Id.* at 261. The Federal Circuit has noticed the role of the patent system in the allocation of commercial resources. See, e.g., *Johnson & Johnston Assocs. v. R.E. Serv. Co.*, 285 F.3d 1046, 1072 (Fed. Cir. 2002) (Newman, J., dissenting) (“The role of patent systems in the allocation of commercial resources is of ever-increasing economic importance, as technology dominates the economy.”).

11. Commentators frequently recognize, both implicitly and explicitly, that patents are the equivalent of a subsidy. Lamenting that “direct subsidization is politically unlikely,” one writer observed, “The standard industrial policy mechanisms are direct subsidization and regulatory relief. . . . [A] modification of the patent system, rather than regulatory relief in the classic sense of the term, would best meet the needs of the [biotechnology] industry.” Karen I. Boyd, *Nonobviousness and the Biotechnology Industry: A Proposal for a Doctrine of Economic Nonobviousness*, 12 BERKELEY TECH. L.J. 311, 319 (1997). See generally Paul Goldstein, *The Competitive Mandate: From Sears to Lear*, 59 CAL. L. REV. 873 (1971) (discussing the relationship between federal and state monopolies and the federal constitutional mandate for a competitive economy); Brett Frischmann, *Innovation and Institutions: Rethinking the Economics of U.S. Science and Technology Policy*, 24 VT. L. REV. 347 (2000) (suggesting a framework of innovation to help coordinate United States science and technology policy). See also Dean Baker, *The High Cost of Protectionism: The Case of Intellectual Property Claims* (Econ. Pol’y Inst., Washington, D.C.), Sept. 3, 1996, at 11.

12. Dam, *supra* note 7, at 270.

13. *Id.* at 271.

14. I use the word “innovator” and “innovation” throughout this Article in its legal, not economic or “Schumpeterian,” sense. See Brett Frischmann, *Innovation and Institutions: Rethinking the Economics of U.S. Science and Technology Policy*, 24 VT. L. REV. 347, 348 (2000). An innovation, in patent law, is something that is almost inevitably the latter as well. In other words, it is new technology and nothing more. To an economist, an innovation is something quite different with, most importantly, definite commercial advantages. The “Schumpeterian” view does not question the notion of invention and, perhaps naively, accepts its reality. This Article, to the contrary, examines whether the very notion of invention is a political construct.

benefits of the early entry period will not permit recoupment of the original investment, the incentive will be insufficient to stimulate innovation in the first place. That rationale lies at the heart of patent law. Patent law is designed to encourage the innovator by guaranteeing that, even after the entry period, other competitors will not be able to enter the market. The government, through its patent regime, bestows upon the prospective innovator the right to charge the *supra*-competitive price, otherwise available only during the entry period, for a period of nearly twenty years. The difference between the *supra*-competitive patent price and the competitive market price is the extra source of income that the patent regime promises to the innovator. The extra income that ultimately comes from the public is effectively a subsidy that the government provides inventors at public expense by virtue of the patent regime. Obviously, the government could accomplish the same result through a direct subsidy by taxing the public generally and paying the innovator directly (the National Institutes of Health is an example of such direct subsidization).¹⁵

Those interested in better understanding the nature of IP must discover where in the patenting process the consideration of public matters is converted into, or defined as, a purely private matter. In considering the "ownership" or even existence of IP, the relevant factors are almost invariably public matters, which, through the language of IP, are made to seem solely the private affairs of innovators. This conception holds true, paradoxically, even when the inventor is the government.¹⁶

The nature of the process seems largely different from its practical operation, because the public competitive judgments are, through a definitional stage,¹⁷ treated as private issues. The process defines competitive conditions and issues as matters of private property rights. Whether an innovation is patentable depends in large part upon the amount of the innovator's investment, the funding of the applicable industry, and the appropriateness of the underlying investments.¹⁸ The analysis

15. The National Institutes of Health (NIH) provided over fourteen billion dollars of extramural funds in 2000. National Institutes of Health, *NIH Awards to U.S. Institutions of Higher Education by Component and Funding Mechanism, Fiscal Year 2000*, at <http://grants2.nih.gov/grants/award/trends/bycomp00.htm> (last visited Oct. 14, 2004). One economist suggests those subsidies are so effective that, if they totally replaced the present pharmaceutical patent subsidy system, benefits exceeding fifty-six times those of GATT would accrue to the United States health care system. Baker, *supra* note 11, at 40.

16. Until about 1980, the government held large numbers of government patents that were available to all. Passage of the Bayh-Dole Act resulted in treating patents more like private property with the rights almost automatically going to the contractors who achieved the invention using government funding. See Peter S. Arno & Michael H. Davis, *Why Don't We Enforce Existing Drug Price Controls? The Unrecognized and Unenforced Reasonable Pricing Requirements Imposed upon Patents Deriving in Whole or in Part from Federally Funded Research*, 75 TUL. L. REV. 631 (2001).

17. "The definitional stop, so beloved of ordinary language analysts, is frequently used to close off or obscure the political choices involved in a decision." James Boyle, *The Politics of Reason: Critical Legal Theory and Local Social Thought*, 133 U. PA. L. REV. 685, 738 n.155 (1985). See H.L.A. Hart, *Prolegomenon to the Principles of Punishment*, in *PHILOSOPHY OF PUNISHMENT* 15, 18 (Robert M. Baird & Stuart E. Rosenbaum eds., 1988).

18. See *infra* Part IV.

determines whether the advance is the product of an inventor as opposed to a mere plodder.¹⁹ The direct consequence is a conclusion about whether the innovation is the inventor's property or is a mere pedestrian advance freely available as part of the public domain. The implications of such a misplaced definition are highly significant. At least two serious, potentially undesirable, and even socially dangerous consequences result. Domestically, the unexamined grant of monopoly rights to private concerns within a supposedly free enterprise regime can create unjust social and political effects. Internationally, the demand for, and possibly imposition of, exclusive trading rights, especially by nationals of wealthy nations over those of undeveloped ones, may find overly simple and unfair justifications in unexamined claims of supposed property rights.

The following sections of this Article attempt to demonstrate that the core concept of American patent law (and, indeed, of "international" patent law)²⁰—the definition of invention—is nothing more than a disguised judgment of public competitive interests masquerading as an objective measure of technological features. This definition is the so-called "nonobviousness inquiry," written into the 1952 Patent Act²¹ as an attempt to broaden the definition of when an invention occurs and, thus, when a patent monopoly is available.²²

Before proceeding, however, understanding the significance of this point is crucial. Determining that something is inventive decides not only that it merits a patent but also that it is the sort of advance that innovators would not have made without the promise of a profitable monopoly.²³ If the distinction between the inventive and the pedestrian were a factual, technical one, the definition of an invention might not incorporate political or policy judgments. Because, as subsequent portions of this Article illustrate, the distinction lies along a continuum

19. See Lawrence B. Ebert, *You Can't Know When You Can't See It*, INTELL. PROP. TODAY, April 2001, at 22.

20. See Agreement on Trade-Related Aspects of Intellectual Property Rights, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1C, Legal Instruments—Results of the Uruguay Round vol. 31, 33 I.L.M. 1125, 1208 n.27 (1994) ("For the purposes of this Article . . . 'inventive step' . . . may be deemed . . . synonymous with . . . 'non-obvious' . . .") [hereinafter TRIPS].

21. 35 U.S.C. § 103 (2000).

22. Other scholars have noted inherent problems with the nonobviousness requirement. See, e.g., Linda J. Demaine & Aaron Xavier Fellmeth, *Reinventing the Double Helix: A Novel and Nonobvious Reconceptualization of the Biotechnology Patent*, 55 STAN. L. REV. 303, 361 (2002) ("[T]he section 101 'invention or discovery' requirement seems to overlap with the section 103 nonobviousness requirement because the creation of something 'obvious' could not require much invention.").

23. This rationale, of course, is the basis for the patent regime. See A. Samuel Oddi, *Beyond Obviousness: Invention Protection in the Twenty-First Century*, 38 AM. U. L. REV. 1097, 1125–26 (1989) [hereinafter Oddi (Obviousness)]. This calculus—separating those advances that innovators would only make because of the promise of the patent from those that ordinary practitioners would make in the normal course of events—is what the nonobviousness inquiry purportedly accomplishes. However, some doubt the proposition. "Patent statutes do not distinguish, and appear incapable of distinguishing, those inventions that are patent induced from those that are nonpatent induced." A. Samuel Oddi, *The International Patent System and Third World Development: Reality or Myth?*, 1987 DUKE L.J. 831, 839 [hereinafter Oddi (IPS)].

without any principled loci, identifying those advances which are factually inventive without reference to some other non-factual policy preference is impossible. In another sense, no category of innovations can exist that does not depend, for classification as an invention, upon the added incentive of the patent monopoly. Because, in the opinion of many scientists and judges, invention is inevitable, the factual basis, although not the economic impact, of the patent calculus is fallacious and its result reflects political rather than technological judgments.

A. *Are Inventions Inevitable?*²⁴

Although patent law claims to separate those advances that innovators would not have made without additional special skill from those that proprietors would have made in any event by rewarding only those distinctive “inventors,” most commentators agree that patent law can only identify those advances innovators would not have made quite as quickly. Much evidence indicates that inventions proceed apace, irrespective of legal rules.²⁵ Other evidence indicates that, regardless of the incentives, many inventions will not arise until the time is right.²⁶ Still other evidence indicates that technological progress is related more to the technological development and economic infrastructure of a given country than to any particular patent regimes. Consequently, advanced countries make more inventions than less-developed ones, even if the latter have more “advanced” patent

24. This title is taken from William F. Ogburn & Dorothy Thomas, *Are Inventions Inevitable? A Note on Social Evolution*, 37 POL. SCI. Q. 83 (1922), in which the authors list 148 inventions that two or more persons made almost simultaneously. They conclude “that the evidence presented of independent duplicate origins of inventions brings out forcibly the importance of the cultural factor in the production of inventions.” *Id.* at 92. One might conclude that patent law is among the cultural factors involved, but Ogburn and Thomas expressly excluded patent law. They attributed the velocity of innovation to “the elements of the *material* culture at any one time.” *Id.* at 87 (emphasis added). Consequently,

electrical appliances could not have been invented in, let us say, the fifteenth century, because the fundamental discoveries regarding electricity had not been made. A certain cultural preparation was quite necessary for the invention of the telegraph. The fact that so many electrical inventions followed so quickly . . . suggests the inevitability of these inventions.

Id. at 88.

25. See *Diamond v. Chakrabarty*, 447 U.S. 303, 317 (1980). See also *National Wire Bound Box Co. v. Healy*, 189 F. 49 (7th Cir. 1911) for this proposition:

An invention is not something that, but for the particular inventor or inventors, would not have been. Inventions come along as the discovery of gas deposits come[s] along—the contribution of some particular person to the world’s knowledge—but if not by that person, then, in the course of time, and usually in a very short time, by some one else.

Id. at 55. See *infra* note 41 and accompanying text.

26. British science historian James Burke has explored this idea elegantly by tracing the interdependent relationships between diverse technological advances. See *infra* notes 33 & 37.

regimes.²⁷ As Jefferson wrote, “it may be observed that the nations which refuse monopolies of invention, are as fruitful as England in new and useful devices.”²⁸ Even the Supreme Court has observed that patent laws, at best, only encourage earlier invention: “Whether respondent’s claims are patentable may determine whether research efforts are accelerated by the hope of reward or slowed by want of incentives, but that is all.”²⁹ In other words, patent law simply acts as an accelerator upon particular parts of our technological economy.

III. THE FINE LINE BETWEEN INVENTIVE AND NONINVENTIVE

The next section on nonobviousness discusses the legal rules and problems associated with the decision to categorize a technological advance as nonobvious. First, an overview is necessary to place nonobviousness in its proper context. The

27. Consider the following:

The U.S. position in the international fight over intellectual property rights is based on the proposition that the additional innovation induced by stronger patent systems is so substantial that the net social impact of a strengthening of intellectual property rights abroad will be positive. These propositions are empirically testable, yet the empirical evidence underlining these propositions ranges from sketchy to nonexistent. . . . We show that the 1988 patent reforms in Japan expanded the scope of patent protection Empirically analyzing data on 307 Japanese firms during the period 1980 to 1994, we find little evidence that this expansion of patent scope induced additional R&D effort by Japanese firms.

MARIKO SAKAKIBARA & LEE BRANSTETTER, DO STRONGER PATENTS INDUCE MORE INNOVATION? EVIDENCE FROM THE 1998 JAPANESE PATENT LAW REFORMS 1–2 (Nat’l Bureau of Econ. Research, Working Paper No. 7066, 1999). Unsurprisingly, while Sakakibara and Branstetter found little additional innovation, they did find, as a result of patent reforms, an increase in patenting in the sense that the number of patent claims (although not the rate of application filings) accelerated after the patent law changed to facilitate such an increase. *Id.* at 27. Though seemingly paradoxical, sometimes a negative correlation appears between IP and innovation. JAMES E. BESSEN & ERIC MASKIN, SEQUENTIAL INNOVATION, PATENTS, AND IMITATION (Massachusetts Institute of Technology, Department of Economics, Working Paper No. 00-01, Jan. 2000), available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=206189. Oddi lists seven articles concluding that patents are disadvantageous for developing countries and another four asserting the opposite. Oddi (IPS), *supra* note 23, at 832 n.4.

28. Letter from Thomas Jefferson to Mr. Isaac M’Pherson (Aug. 13, 1813), in 6 THE WRITINGS OF THOMAS JEFFERSON 181 (H.A. Washington ed., 1854). An important fact that colored Jefferson’s views was that most patents, in that time, were of the “importation” variety, not requiring invention at all.

29. *Chakrabarty*, 447 U.S. at 317. The *Chakrabarty* court voiced doubt about patentability as a necessary precursor to innovation:

The grant or denial of patents on micro-organisms is not likely to put an end to genetic research or to its attendant risks. The large amount of research that has already occurred when no researcher had sure knowledge that patent protection would be available suggests that legislative or judicial fiat as to patentability will not deter the scientific mind from probing into the unknown any more than Canute could command the tides.

Id. Two MIT researchers, echoing this sentiment, recently noted the astonishingly great innovation that occurred in the computer software industry not after, but before the assurance of IP protection. See BESSEN & MASKIN, *supra* note 27.

nonobviousness inquiry examines the entire universe of technological advances in a particular industry or art—from the mundane to the amazing, from the simple to the complex, from the gerry-rigged to the elegant—and separates them into two categories: the ordinary and the inventive. Nonobviousness implies that inventive advances are distinctly different from all others.³⁰ This claim is important, of course, because absent essential differences, the decision to grant a patent would have to rest on explicitly more political and debatable reasons. For instance, if one recognizes that all technological advances are essentially the same, effectively prosaic and banal, the decision to subsidize one and not the other would have to be based on reasons relevant to the subsidy itself, perhaps that a certain industrial sector deserved added economic support.

The line between the inventive and the noninventive is promoted as a rigid one.³¹ A line admittedly unsecured and free-floating, with a location shifting at

30. The patent bar and other pro-patent interests, since successfully having it written into the 1952 Act, often emphasize that the inquiry measures the invention, not the inventor. "Patentability shall not be negated by the manner in which the invention was made." 35 U.S.C. § 103(a) (2000). "[I]t is the invention as a whole that must be considered in obviousness determinations. The invention as a whole embraces the structure, its properties, and the problem it solves." *In re Wright*, 848 F.2d 1216, 1219 (Fed. Cir. 1988). See also *Lucas Aerospace Ltd. v. Unison Indus., L.P.*, 899 F. Supp. 1268, 1289 (D. Del. 1995) (requiring factual inquiries in the nonobviousness test). "Our interest is in the child, not in how or where it was born or who were its parents." *Chicago Steel Foundry Co. v. Burnside Steel Foundry Co.*, 132 F.2d 812, 818 (7th Cir. 1943). "This verbal test seemed to indicate that the actual manner by which the inventor conceived and produced the invention was of importance. However, the decisions adopted the contrary view that it is the result alone that is evaluated . . ." 2 DONALD S. CHISUM, A TREATISE ON THE LAW OF PATENTABILITY, VALIDITY AND INFRINGEMENT § 5.04[2] (Supp. 2003).

31. "[O]ne of the objectives of the patent laws is to reward uniqueness . . ." *United States v. Loew's Inc.*, 371 U.S. 38, 46 (1962). The contention that inventive advances are distinctively different from all other innovations rests at the very core of some of the most hotly disputed issues in patent law. The language courts use sometimes seems inappropriately charged. Some view patent law as a matter of human, not property, rights. "The right to exclude others is the essence of the human right called 'property.' The right to exclude others from free use of an invention protected by a valid patent does not differ from the right to exclude others from free use of one's automobile, crops, or other items of personal property." *Panduit Corp. v. Stahl Bros. Fibre Works, Inc.*, 575 F.2d 1152, 1158 n.5 (6th Cir. 1978). At times, ordinary patent infringement is characterized as theft. In order "to 'prevent an infringer from stealing the benefit of an invention,'" "the doctrine of equivalents must . . . remain within the boundaries established by the prior art, the scope of the patent claims themselves, and any surrendered subject matter." *K-2 Corp. v. Salomon S.A.*, 191 F.3d 1356, 1368 (Fed. Cir. 1999). See also *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 289 F. Supp. 2d 1347, 1357 (M.D. Fla. 2003) (holding infringement still possible under doctrine of equivalents even when no literal infringement present); *Mallinckrodt Inc. v. Masimo Corp.*, 292 F. Supp. 2d 1201, 1206 (C.D. Cal. 2003) (testing infringement using the doctrine of equivalents in addition to literal infringement tests). At other times, infringement constitutes fraud. "The purpose of the doctrine of equivalents is to prevent a form of fraud, as the Supreme Court called it in *Graver Tank*. Its purpose is to protect inventors from those who would take the invention and by insubstantial change avoid the letter of the claims." *Vehicular Techs. Corp. v. Titan Wheel Int'l, Inc.*, 141 F.3d 1084, 1093 (Fed. Cir. 1998). Fraud is a strong word, especially in the context of the doctrine of equivalents, where one might just as easily characterize the overbroad demands of a patent proprietor as a fraud upon the public.

[A] patentee should not be able to obtain, under the doctrine of equivalents, coverage which he could not lawfully have obtained from the PTO by literal claims. The doctrine of equivalents exists to prevent a fraud on a patent . . . *not*

will, would be subject to the fatal criticism that it is arbitrary and, worse, political. After all, the result of patent protection is the transfer of public (consumer) resources to private (industrial) parties. Such a tax would be intolerable without full political debate unless characterized as a property right attaching to some inherent technological qualities rather than the equivalent of a selective tax effectively redistributing wealth.

However, the notions that all technological advances are essentially the same and that the line is completely arbitrary are neither new nor especially startling to specialists. The Patent Act itself admits as much through its choice of an objective test for invention.³² More important, the scientific literature, unconcerned with the niceties of patent law, has found unnecessary a departure from the simple truth that the inventive and banal do not share the same continuum, but instead, share the same unimaginative location. As James Burke observes,

[H]istory is not, as we are so often led to believe, a matter of great men and lonely geniuses pointing the way to the future from their ivory towers. At some point every member of society is involved in the process by which innovation and change comes about, and . . . given average intelligence and the information available to the innovators of the past, any reader could have matched their achievements.³³

The author later states:

In the heroic treatment, historical change is shown to have been generated by the genius of individuals, conveniently labelled 'inventors'. In such a treatment, Edison invented the electric light, Bell the telephone, Gutenberg the printing press, Watt the steam engine, and so on. But no individual is responsible for producing an invention *ex nihilo*. The elevation of the single inventor to the position of sole creator at best exaggerates his influence over events³⁴

to give a patentee something which he could not lawfully have obtained from the PTO had he tried. Thus, since prior art always limits what an inventor could have claimed, it limits the range of permissible equivalents of a claim.

Wilson Sporting Goods Co. v. David Geoffrey & Assocs., 904 F.2d 677, 684 (Fed. Cir. 1990) (internal citations omitted).

32. The Act, as amended to exclude the Supreme Court's requirement of a "flash of creative genius," *Cuno Eng'g Corp. v. Automatic Devices Corp.*, 314 U.S. 84, 91 (1941), excluded, at the same time, the possibility of inherently distinguishing some advances. 35 U.S.C. § 103. Not coincidentally, this development mirrors much earlier changes in negligence law where an objective measure of "fault" substituted for a subjective one. *Vaughan v. Menlove*, 3 Bing. (N.C.) 468, 132 Eng. Rep. 490 (Comm. Pl. 1837).

33. JAMES BURKE, *CONNECTIONS* 13 (1978).

34. *Id.* at 288.

Stressing his point one final time, Burke reminds his readers that “no inventor works alone. The myth of the lonely genius, filled with vision and driven to exhaustion by his dream, may have been deliberately fostered by Edison, but even he did not invent the light bulb without help from his colleagues and predecessors.”³⁵

Granting the patent monopoly through the nonobviousness inquiry, when inventions are inevitable,³⁶ seems a rather awkward way of separating out those advances requiring or meriting greater financial awards from other indistinguishably different ones. The awkwardness grows upon consideration that offering incentives to selective indistinguishably different advances is, at best, a very chancy way of furthering technological progress. We can have very little faith that one invention will necessarily lead to other particularly desirable ones, because we really do not know how innovations which are more useful, as opposed to less useful, are achieved.³⁷

In short, the vast majority of, and probably all, inventions are composed of known elements, of which the novel arrangement, application, or utility constitutes the invention. “Virtually all inventions are necessarily combinations of old elements.”³⁸ That being true, the patentability of any one invention turns solely on

35. *Id.* at 291.

36. See Ogburn & Thomas, *supra* note 24. See also *Diamond v. Chakrabarty*, 447 U.S. 303, 317 (1980) (doubting the need for patentability as a necessary precursor to innovation).

37. Burke's book incontestably makes this point by claiming that a linear historical view of technological progress is the most comfortable. However, the path of progress that benefits mankind is much less linear, much less intelligible or coherent, and almost entirely unpredictable and inscrutable. “The triggering factor is more often than not operating in an area entirely unconnected with the situation which is about to undergo change.” BURKE, *supra* note 33, at 289. Consider, as one example, the chimney:

A linear view of the past would, for instance, place the arrival of the chimney in a sequence of developments relating to change in domestic living. Yet the alteration of life-style brought about by the chimney included year-round administration and increased intellectual activity, which in turn contributed to a general increase in the economic welfare of the community to a point where the increase in the construction of houses brought about a shortage of wood. The consequent need for alternative sources of energy spurred the development of a furnace which would operate efficiently on coal, and this led to the production of molten iron in large quantities, permitting the casting of the cylinders which were used in the early steam engines.

Id. at 289. If wishing to increase industrial motive power, who would think first of encouraging domestic comfort? The PTO? The huge proportion of patents never commercialized at least partly illustrates the unpredictability of research and development. “In reality, the majority of patents are not commercialized.” Simone A. Rose, *Patent “Monopolyphobia”: A Means of Extinguishing the Fountainhead?*, 49 CASE W. RES. L. REV. 509, 518 (1999). See Daniel N. Christus, A. José Cortina, Robert E. Wagner & John T. Winburn, *Intellectual Property in the Americas*, 13 AM. U. INT’L L. REV. 1095, 1098 (1998).

38. *Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561, 1575 (Fed. Cir. 1987). See also *Env’tl. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698 (Fed. Cir. 1983) (“That all elements of an invention may have been old (the normal situation), or some old and some new, or all new, is however, simply irrelevant. Virtually all inventions are combinations and virtually all are combinations of old elements.”); *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 1566 (Fed. Cir. 1983)

the degree of innovation of that particular combination, a judgment not made with reference to the technical nature of the invention, but solely, and as required by statute, with reference to the prevailing social and economic conditions at the time of the invention.³⁹ This framework is the nonobviousness inquiry.

IV. NONOBVIOUSNESS

A. *The Apparent Need to Identify Exceptional, or Noninevitable, Innovations*

Inventions may be inevitable, but the patent system proceeds from a different premise—that absent the patent monopoly, innovators will either not make the inventions at all or will make them at later dates. This idea conflicts, of course, with the apparent fact that once the conditions are right, inventions result, often in more than one place at a time.⁴⁰ In fact, evidence indicates that the patent monopoly actually slows the pace of invention, at least in some industries.⁴¹

(“[V]irtually every claimed invention is a combination of old elements”); David E. Wigley, *Evolution of the Concept of Non-Obviousness of the Novel Invention: From a Flash of Genius to the Trilogy*, 42 ARIZ. L. REV. 581, 598 (2000) (“[M]ost, if not all, inventions are to some extent innovative combinations of known elements.”).

39. One of the many practical problems with transforming the inherently regulatory and therefore ambiguous legal abstraction of nonobviousness into actual administrative decisions granting or denying patents is that the PTO feels equally ambiguous about the rules under which its examiners must make these decisions. Constraining the examiners requires that they find, in prior patent applications, each and every element of the new combination, and further, that they find a “teaching” in those prior applications that indicates the appropriateness of a combination. Then, to free examiners from this artificially narrow constraint, a constraint not present in the statute, the PTO allows examiners to find both the teaching and even some elements of the combination in “knowledge generally available,” not necessarily requiring a specific prior art reference. Finally, to constrain the freedom such a rule invites, the PTO requires that the general availability of such knowledge be either “capable of instant and unquestionable demonstration” or “notorious.” PATENT AND TRADEMARK OFFICE, U.S. DEP’T. OF COMMERCE, MANUAL OF PATENT EXAMINING PROCEDURE, ¶ 2142, at 2100-97; ¶ 2143, at 2100-97; ¶ 2143.01, at 2100-98; ¶ 2144, at 2100-101; ¶ 2144.03, at 2100-102–2100-103 (7th ed., rev. 2000) [hereinafter MPEP].

40. See *supra* Part II.A.

41. See BESSEN & MASKIN, *supra* note 27. See also Teresa M. Summers, *The Scope of Utility in the Twenty-First Century: New Guidance for Gene-Related Patents*, 91 GEO. L.J. 475, 476 (2003):

[B]road patents covering basic research in today’s biotech industry are inappropriate. They are inappropriate because the development of today’s patent law does not account for two trends in modern biotechnology. First, biotech research rapidly unlocks science at an increasingly rudimentary level. Meanwhile, patent law has become much broader, threatening to impede progress by taking fundamental building blocks of science out of the public domain. Second, recent legislation, enacted to foster a merger between, traditionally distinct public and private sector researchers, encourages discoverers of rudimentary upstream research tools to patent their product and license it to downstream commercial innovators.

Dean Baker estimates expanding existing direct federal subsidies to substitute for the present patent subsidies of pharmaceutical research would yield fifty-six times the efficiencies that internationalizing GATT standards has accomplished. Baker, *supra* note 11, at 45. “A standard for equivalence of code elements that ignores these factors risks stifling legitimate efforts to design around existing software

Nevertheless, the patent regime relies on an untested (and perhaps untestable) faith that its existence correlates singularly and positively with the pace of innovation.⁴² The patent monopoly—the exclusive control of the right to make, use, sell, or even offer to sell, new products or processes⁴³—is therefore only available with respect to some products or processes. The monopoly is, in that sense, exceptional (the monopoly is also exceptional in the theoretical sense, because in a so-called free market economy, the patent monopoly must be the exception to an otherwise freely competitive market). Its relatively occasional appearance makes it no less a monopoly. In fact, the infrequency should, but does not often seem to, raise serious questions about its uneven distribution. A reference to intuitive property and technological terminology justifies the relative infrequency of the granting of patent rights. The goods or processes must be “inventive” to justify patent protection. This reference to common parlance, the notion of an “invention,” tends to shield the special nature of patent protection from any or much special inquiry. After all, common sense suggests that an invention is special enough to merit special treatment. In fact, this section is devoted to that area of patent law which attempts to distinguish those innovations that merit the patent monopoly from those that do not. We will see, however, that hardly anything “special” warrants the resulting monopoly. Rather, something far closer to “arbitrary” or, at best, “policy,” (or raw politics) determines what qualifies.

First, patent law does not attempt to find something special, in the subjective sense, to justify awarding the patent monopoly.⁴⁴ Sixty years ago, in *Cuno*

patents.” Julie E. Cohen & Mark A. Lemley, *Patent Scope and Innovation in the Software Industry*, 89 CAL. L. REV. 1, 6 (2001). “It is uncertain whether this large breadth of coverage is required to facilitate the original innovation, or whether it places an undue burden on future research and development by blocking off too much ground.” Paul M. Janicke, *When Patents Are Broadened Midstream: A Compromise Solution to Protect Competitors and Existing Users*, 66 U. CIN. L. REV. 7, 13 (1997). “[T]he first patent holder in line has the power to hold up the entire downstream chain of research. Clarisa Long, *Proprietary Rights and Why Initial Allocations Matter*, 49 EMORY L.J. 823, 833 (2000). This power to block improvements places the first patent holder in a superior bargaining position. Robert Merges, *Intellectual Property Rights and Bargaining Breakdown: The Case of Blocking Patents*, 62 TENN. L. REV. 75, 79–81 (1994).

42. The experience of the developing world largely undercuts this assumption. See Oddi (IPS), *supra* note 23.

43. See 35 U.S.C. § 271(a) (2000).

44. Although the text describes the patent system in its textual sense, this description is wrong, at least partially, in another sense. As James Boyle has observed, beneath the patent system lies a committed belief in the romantic inventorship doctrine, which allows patent law to draw the public-private line in a confident manner. James Boyle, *A Theory of Law and Information: Copyright, Spleens, Blackmail, and Insider Trading*, 80 CAL. L. REV. 1413, 1418–19 (1992). By subscribing, *sotto voce*, to the romantic inventorship doctrine, patent law can accept inventors’ claims to monopoly and reject the public interest by favoring the aggressive, risk-taking inventor over the passive, job-inspired public. Using such images, the patent system awards all rights to the inventor, even if the inventor simply rearranged elements already belonging to the public. The law, attached to the romantic vision of the inventor, assumes but does not require proof that a rearrangement is worthy. On the other hand, the Supreme Court has repeatedly admonished that the inventor is incidental to the patent system, the goal of which is not the inventor’s fortuitous monopoly but the invention’s contributed progress to the public domain. See *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349 (1991) (“The primary

Engineering Corp. v. Automatic Devices Corp.,⁴⁵ the Supreme Court, in what intuitively seems an exercise of common sense, insisted that to be patentable, inventions had to demonstrate “the flash of creative genius.”⁴⁶ In 1952, Congress statutorily rejected the Court’s decision and added the current patent law requirement of “nonobviousness”—the so-called “ordinary practitioner” test. To make it clear that simple trial and error is more than adequate and that any notion of “genius” is unnecessary surplus, Congress added the last sentence of section 103(a), which reads: “Patentability shall not be negated by the manner in which the invention was made.”⁴⁷ What is required, in other words, is that the inventor be just a bit more than a “plodder.”⁴⁸ Interestingly, in this way the Patent Act validates the very “sweat” theory that the Supreme Court banished from copyright law in *Feist*.⁴⁹ While the notion of an invention and certainly that of a “flash of creative genius” imply something inherently special about an innovation, the new 1952 requirement of nonobviousness was simply a traditional balancing test. As one observer put it, “It would therefore appear that the central issues concerning . . . inventions and discoveries . . . are more a question of fundamental

objective of copyright is not to reward the labor of authors, but ‘[t]o promote the Progress of Science and useful Arts.’”) (alteration in original) (citation omitted); *United States v. Paramount Pictures, Inc.*, 334 U.S. 131, 158 (1948) (“The copyright law, like the patent statutes, makes reward to the owner a secondary consideration.”); *United States v. Line Material Co.*, 333 U.S. 287, 320 (1948) (“But however that may be, the Constitution places the rewards to inventors in a secondary role. It makes the public interest the primary concern in the patent system.”); *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 511 (1917) (“[T]his court has consistently held that the primary purpose of our patent laws is not the creation of private fortunes for the owners of patents but is ‘to promote the progress of science and useful arts’”) (citation omitted); *Kendall v. Winsor*, 62 U.S. (21 How.) 322, 327–28 (1858) (“It is undeniably true, that the limited and temporary monopoly granted to inventors was never designed for their exclusive profit or advantage; the benefit to the public or community at large was another and doubtless the primary object in granting and securing that monopoly.”); *Pennock v. Dialogue*, 27 U.S. (2 Pet.) 11, 18 (1829) (“While one great object was, by holding out a reasonable reward to inventors, and giving them an exclusive right to their inventions for a limited period, to stimulate the efforts of genius; the main object was ‘to promote the progress of science and useful arts’”) (citation omitted).

45. 314 U.S. 84 (1941).

46. *Id.* at 91. Saying some might characterize *Cuno*, which was reversed statutorily less than a decade later, as an exercise in common sense is not just academic obstinacy. While citations to the case usually refer only to its famous phrase, the sentence containing the phrase and the sentence following seem to show genius of another sort as well. Justice Douglas saw, as Jefferson had a century and a half earlier, that patent law was basically an economic embarrassment, representing an intrusion upon public rights. A heavily lobbied Congress overlooked this mastery of patent basics and instead substituted the nonobviousness inquiry for the considered judgment of Douglas at the height of his jurisprudential powers: “That is to say, the new device, however useful it may be, must reveal the flash of creative genius, not merely the skill of the calling. If it fails, it has not established its right to a private grant on the public domain.” *Id.*

47. 35 U.S.C. § 103(a).

48. Ebert, *supra* note 19, at 22. See *infra* note 103 and accompanying text.

49. *Feist Publ’ns*, 499 U.S. at 352. This line of thought does not necessarily render section 103(a) constitutionality suspect, and the Supreme Court is quite unlikely to ever upset established industry interests by so holding. However, this anomaly does illustrate the powerful economic, as opposed to theoretical, foundations of patent law.

policy than the essence of things.”⁵⁰ Thus, the earmark of an “invention” is not that something special inheres in its nature, but that, all things considered, the innovator (or more commonly the innovator’s employer) merits monopoly profits.

B. Section 103 and the Nonobviousness Test

Patent law attempts to distinguish between the inevitable (the unpatentable) innovation and the exceptional (the patentable) innovation through section 103, which requires that, to be patentable, the purportedly inventive aspects of any innovation have to be nonobvious to a practitioner of ordinary skill in the pertinent art.

A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.⁵¹

Importantly, the measurement of nonobviousness is to be performed as of the date of the invention. The timing of this measurement requires, by definition, a legal fiction: from the vantage point of many years later, the statute requires the answer to a question based on the facts and circumstances at the time of the invention, when no one asked or attempted to answer the question. Thus at the outset, as one author has observed, this very concept of nonobviousness embraces an economic as well as a technological dimension. “Thus, although it might be conceded that an invention is ‘obvious’ in the sense that it is technically *possible*, an invention may be economically, or relatively, nonobvious because a rational economic actor would not pursue it.”⁵²

Although the Federal Circuit insists that this inquiry⁵³ (that of what would have been obvious to the ordinary practitioner) “is a question of law based on underlying

50. Kojo Yelapaala, *Owning the Secret of Life: Biotechnology and Property Rights Revisited*, 32 MCGEORGE L. REV. 111, 137 (2000). While Yelapaala addressed biotechnological innovations, the observation surely applies to other areas of patentability. In the biotechnology context, an awareness of “annexing and patenting the common heritage of mankind, and, more recently, mankind itself” is only sensible. Yvonne Cripps, *Patenting Resources: Biotechnology and the Concept of Sustainable Development*, 9 IND. J. GLOBAL LEG. STUD. 119, 133 (2001).

51. 35 U.S.C. § 103(a) (2000).

52. Boyd, *supra* note 11, at 337–38. Although the author made this statement to support an explicit change in the nonobviousness standard, she also recognized that the present test can easily accommodate this kind of nonobviousness, saying, “economic nonobviousness is not inconsistent with the *current* doctrine of nonobviousness.” *Id.* at 340. Although she proposed the change because she thought decisions applying an economic test were illegitimate and a “subterfuge,” *id.* at 339, this Article argues that the use of a reasonable person or ordinary practitioner test to accommodate a possibly infinite number of values is hardly illegitimate. Instead, it is the nature of any objective test and is the reason behind the current version of the statutory test.

53. The inquiry in question is that of the appropriate level of skill pursuant to § 103 and the *John Deere* test. See *infra* Part IV.C.

findings of fact,”⁵⁴ the Supreme Court has found the Federal Circuit less than persuasive on this issue, questioning “the degree to which the obviousness determination is one of fact.”⁵⁵ Indeed, value judgments inevitably fashion the ingredients that contribute to the determination. First, the ordinary practitioner is not any one individual practitioner, so that no matter how many witnesses may testify, a court is not bound by the testimony of any particular witness or number of witnesses regarding their potential knowledge or actions.⁵⁶ Second, when the test is, as is usually the case, whether a practitioner would have thought of combining known features, or “references,” such thinking is almost never within the domain of testimony itself, because references can be combined either when they themselves contain a suggestion of combination or, on a much more open-ended level, when knowledge generally available to the practitioner would have so suggested.⁵⁷ We always know that at least one person—the inventor—did understand this suggestion, but his individual decision is not part of the test. We also know the rest of the industry, whether understanding the suggestion or not, did not act on it,⁵⁸ so that the PTO or a court effectively has carte blanche to go either way.

A staple of patent law is that near-simultaneous invention by two or more different inventors does not contradict nonobviousness.⁵⁹ However, if others reach

54. *Okajima v. Bourdeau*, 261 F.3d 1350, 1354 (Fed. Cir. 2001).

55. *Dennison Mfg. Co. v. Panduit Corp.*, 475 U.S. 809, 811 (1986). *But cf. In re Watts*, 354 F.3d 1362, 1365 (Fed. Cir. 2004) (“Obviousness ‘is a legal conclusion based on underlying findings of fact.’”) (citation omitted); *Bowers v. Baystate Techs., Inc.*, 320 F.3d 1317, 1323 (Fed. Cir. 2003) (“Claim construction is a question of law that this court reviews without deference Infringement . . . is a question of fact Obviousness is a question of law”) (internal citations omitted); *Beckson Marine, Inc. v. NFM, Inc.*, 292 F.3d 718, 725 (Fed. Cir. 2002) (“Obviousness is a legal conclusion based on underlying findings of fact.”).

56. *See In re Metz*, No. 97-1263, 1998 U.S. App. LEXIS 23733 (Fed. Cir. Sept. 22, 1998). Courts routinely reject evidence of what the actual inventor would have done or thought. “The only inquiry is whether . . . relevant prior art, would have rendered the claimed invention obvious to one of ordinary skill in the art; this inquiry, as a matter of law, is independent of the motivations that led the inventors to the claimed invention.” *Life Techs., Inc. v. Clontech Labs., Inc.*, 224 F.3d 1320, 1325 (Fed. Cir. 2000). *See also Velandier v. Garner*, 348 F.3d 1359 (Fed. Cir. 2003) (inquiring into whether the PTO had substantial evidence that one of ordinary skill in the art would have had a reasonable expectation of producing the claimed invention). Similarly, the testimony of other actual (as opposed to hypothetical) practitioners is notoriously subject to challenge. *See, for instance, Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 667 (Fed. Cir. 2000), in which the witness asserted the invention was obvious but admitted that he had more than ordinary skill because he had worked in the field for several decades.

57. *In re Jones*, 958 F.2d 347, 351 (Fed. Cir. 1992). *See infra* note 60.

58. This premise assumes no interference (contesting claims by more than one inventor to the same invention) but raises the dilemma of what to do when the evidence is uncontested that two or more parties developed the same innovation around the same time. Seemingly, the invention was not nonobvious, but the PTO resolution treats each as an inventor, the kind of “special” person whose status is beyond that of the ordinary practitioner and thus irrelevant to the inquiry.

59. The Federal Circuit uncomfortably recognizes the relevance of simultaneous invention. “The fact of near-simultaneous invention, though not determinative of statutory obviousness, is strong evidence of what constitutes the level of ordinary skill in the art.” *Ecolchem, Inc. v. S. Cal. Edison Co.*, 227 F.3d 1361, 1379 (Fed. Cir. 2000) (quoting *Int’l Glass Co. v. United States*, 408 F.2d 395, 405 (Ct. Cl. 1969)). Tempering that recognition is an equal and opposite desire to give effect to the nation’s

the same conclusion within a short amount of time, the industry could easily render the invention obvious, at least in some relative sense. When a near-simultaneous invention occurs, patent law recognizes both parties as inventors. The prize goes to the first, under this country's first-to-invent system,⁶⁰ even though this rule is partly inconsistent with the emphasis, since the 1952 Act, on measuring inventions in terms of the invention and not the inventor.

In determining whether an invention is obvious, the PTO follows a highly mechanical route. No matter how obvious in fact a technical innovation may seem to a lay observer, the PTO will not rule the invention obvious absent the appearance of "references" (almost invariably in previously granted patents) that contain the steps or physical components whose combination in the subject invention the PTO may deem obvious. Even if all the steps or components are found in these published references, though, the combination of such steps or components does not normally constitute an obvious one unless the publications contain some kind of explicit suggestion to combine them. Such an explicit suggestion is necessary, because the PTO (but not necessarily a reviewing court) requires "'a showing of the teaching or motivation to combine prior art references.' That suggestion may come from, *inter alia*, the teachings of the references themselves and, in some cases, from the nature of the problem to be solved."⁶¹

first-to-invent system, which seems to presume multiple inventorship. "Because the statute, 35 U.S.C. § 135 (establishing and governing interference practice), recognizes the possibility of near simultaneous invention by two or more equally talented inventors working independently, that occurrence may or may not be an indication of obviousness when considered in light of all the circumstances." *Lindemann Maschinenfabrik GmbH v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1460 (Fed. Cir. 1984). Courts, therefore, seemingly tilt towards finding simultaneous invention instead of obviousness. "The virtually simultaneous making of the same invention does not in itself preclude patentability of that invention." *Envtl. Designs, Ltd. v. Union Oil Co.*, 713 F.2d 693, 698 n.7 (Fed. Cir. 1983). Prior to the Federal Circuit, simultaneous invention seemed to be more of a full-fledged secondary test of obviousness. *Reeves Bros., Inc. v. U.S. Laminating Corp.*, 417 F.2d 869, 872 (2d Cir. 1969). For further discussions regarding the relationship between simultaneous invention and nonobviousness, see *E.I. du Pont Nemours & Co. v. Berkley & Co., Inc.*, 620 F.2d 1247, 1265 & n.29 (8th Cir. 1980) and Jennifer Chung, Comment, *Does Simultaneous Research Make an Invention Obvious? The 35 U.S.C. § 103 Nonobvious Requirement for Patents as Applied to the Simultaneous Research Problem*, 11 ALB. L.J. SCI. & TECH. 337 (2001).

60. The very existence of the interference procedures is somewhat at odds with obviousness.

The statute establishing interferences in the PTO, 35 U.S.C. § 135, is entirely premised on the concept that the same nonobvious invention may be contemporaneously made by a plurality of inventors. That congressional mandate, and the priority status given in interferences to the first-to-file a patent application, accord with the Constitutional purpose of the patent system, *i.e.*, to encourage public disclosure of inventions in this country.

E. I. du Pont Nemours, 620 F.2d at 1265 n.29.

61. *In re Gartside*, 203 F.3d 1305, 1319 (Fed. Cir. 2000) (citation omitted). See *Ecologchem*, 227 F.3d at 1376 (finding obviousness depends on a combination of prior art references, with some teaching, suggestion, or motivation to combine the references); *Nat'l Steel Car, Ltd. v. Can. Pac. Ry., Ltd.*, 357 F.3d 1319, 1337 (Fed. Cir. 2004) (applying the *Ecologchem* requirement demanding evidence of a motivation to combine the prior art references); *Wesley Jessen Corp. v. Coopervision, Inc.*, 207 F. Supp. 2d 1103 (C.D. Cal. 2002) (applying the *Ecologchem* combination requirement); *Ruiz v. A.B. Chance Co.*, 357 F.3d 1270, 1275 (Fed. Cir. 2004) (requiring a showing of some suggestion or motivation to

Although the Federal Circuit has held that “[t]he presence or absence of a motivation to combine references in an obviousness determination is a pure question of fact,”⁶² courts wrestle with the question of what would motivate the researcher of ordinary skill to search for and combine previous knowledge or references. This question is especially difficult to answer when, as the Federal Circuit has suggested, innovators can obtain the motivation to combine “from the ordinary knowledge of those skilled in the art”⁶³ Another Federal Circuit holding, that the “nature of the problem”⁶⁴ can supply sufficient motivation, simply restates the question.

C. *The Negligence Parallel*

In *Graham v. John Deere Co.*,⁶⁵ the Supreme Court first addressed section 103’s test of nonobviousness and noted its parallel with ordinary negligence.⁶⁶ Expressly created to displace the subjective *Cuno* test of “creative genius,”⁶⁷ the statutory test is an objective one, asking whether the ordinarily skilled practitioner⁶⁸ could have developed the invention. Although a more finely honed version, the test closely resembles the traditional tort law standard of the reasonable person,⁶⁹ clearly not being any particular practitioner nor all practitioners.⁷⁰ The standard is thus undeniably fictional:

combine prior to the actual invention).

62. *In re Gartside*, 203 F.3d at 1316. Indeed, the Court has elsewhere been rather candid about the decisive effects of such a doctrine. “The burden on the party asserting obviousness is more easily carried when the references on which the assertion is based were not directly considered by the examiner during prosecution.” *WMS Gaming Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1355 (Fed. Cir. 1999). In other words, the PTO decision of nonobviousness is not easily subject to review.

63. *Id.*

64. *In re Gartside*, 203 F.3d at 1320.

65. 383 U.S. 1 (1966).

66. The Court noted that any difficulties applying the test were “comparable to those . . . in . . . negligence” *Id.* at 18.

67. *See infra* note 126.

68. In a fashion typical of negligence law, the test specifically excludes factors relating to the inventor’s mental state. “The educational level of the inventor is specifically *not* to be considered.” Wigley, *supra* note 38, at 598. *See Stewart-Warner Corp. v. City of Pontiac*, 767 F.2d 1563, 1570 (Fed. Cir. 1985) (“[S]ection 103 is not concerned with the actual skill of the inventors—whose skill may be extraordinary—but rather with the level of ordinary skill in the art”).

69. This tailored version of the reasonable person originated both statutorily and judicially. “In making the determination of obviousness, the standard of judgment is not what would be obvious to a layman, ‘but rather what would be obvious to one ‘reasonably skilled in the applicable art.’” This has been called ‘a specialized reasonable man test for obviousness.’” *Nicofibers, Inc. v. Reichhold Chems., Inc.*, 505 F. Supp. 496, 507 (S.D. Ohio 1980) (citations omitted). *See also Rockwell Int’l Corp. v. United States*, 147 F.3d 1358, 1366 (Fed. Cir. 1998) (connecting the standard of obviousness to “one skilled in the art”); *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1577 (Fed. Cir. 1997) (applying the “obviousness standard” to “one skilled in the dialysis art”). “The statute itself sets out what may be considered a specialized reasonable man test for obviousness” *Formal Fashions, Inc. v. Braiman Bows, Inc.*, 369 F.2d 536, 538 (2d Cir. 1966). *See also Wesley Jessen Corp. v. Coopervision, Inc.*, 207 F. Supp. 2d 1103, 1107 (C.D. Cal. 2002) (applying *Rockwell*’s standard).

70. *In re Metz*, No. 97-1263, 1998 U.S. App. LEXIS 23733 (Fed. Cir. Sept. 22, 1998).

[T]he test is not whether a particular individual, or two individuals as in this case, of ordinary skill in the art could or did make the connection, but rather if it would have been obvious to the hypothetical person of ordinary skill in the art. The hypothetical person of ordinary skill in the art represents an ideal.⁷¹

The courts construct a hypothetical practitioner, just like tort law's reasonable person, with all the requisite warnings against hindsight, using, of course, hindsight.⁷² Indeed, the Federal Circuit, effectively this nation's patent court, has drawn the parallel to negligence with great force:

With the involved facts determined, the decisionmaker confronts a ghost, i.e., "a person having ordinary skill in the art," not unlike the "reasonable man" and other ghosts in the law. To reach a proper conclusion under § 103, the decisionmaker must step backward in time and into the shoes worn by that "person" when the invention was unknown and just before it was made. In light of *all* the evidence, the decisionmaker must then determine whether the patent challenger has convincingly established . . . that the claimed invention as a whole would have been obvious at *that time to that person*. The answer to that question partakes more of the nature of law than of fact, for it is an ultimate conclusion based on a foundation formed of all the probative facts. If itself a fact, it would be part of its own foundation.⁷³

Just how comprehensively the Supreme Court, in *Graham v. John Deere Co.*,⁷⁴ intended its analogy to negligence is impossible to know:

What is obvious is not a question upon which there is likely to be uniformity of thought in every given factual context. The difficulties, however, are comparable to those encountered daily by the courts in such frames of reference as negligence and scienter, and should be amenable to a case-by-case development.

71. *Id.* at *12.

72. As patent courts routinely counsel against hindsight, see *infra* note 79, negligence courts, unsurprisingly, do the same. See *Di Ponzio v. Riordan*, 679 N.E.2d 616, 620 (N.Y. 1997); *Bily v. Arthur Young & Co.*, 834 P.2d 745, 762 (Cal. 1992); *Tarasoff v. Regents of Univ. of Cal.*, 551 P.2d 334, 345 (Cal. 1976); *People v. Traugher*, 439 N.W.2d 231, 237 (Miss. 1989); *Transp. Ins. Co. v. Moriel*, 879 S.W.2d 10, 20 (Tex. 1994). See also Edward A. Dauer, *A Therapeutic Jurisprudence Perspective on Legal Responses to Medical Error*, 24 J. LEGAL MED. 37, 39 (2003) ("[I]n a very patent way, the tort system is ineradicably infected with 'hindsight bias.'").

73. *Panduit Corp. v. Denison Mfg. Co.*, 810 F.2d 1561, 1566 (1987) (citations omitted).

74. 383 U.S. 1 (1966).

We believe that strict observance of the requirements laid down here will result in that uniformity and definiteness which Congress called for in the 1952 Act.⁷⁵

This statement is telling because, like nonobviousness, negligence is substantially a concealed technique by which to implement unstated political preferences. Most courts and commentators agree that negligence law is a vehicle for making concealed choices among competing political values.⁷⁶ Thus, just as negligence varies according to the circumstances, so does nonobviousness, as *John Deere* suggests. However, the *John Deere* Court's sanguine confidence that case-by-case development would achieve uniformity is, at best, naive.⁷⁷ One of the few things on which legal historians seem to agree is that the development of the objective, reasonable person standard of care served to promote obvious economic interests by effectively subsidizing the industrial revolution (certainly a national industrial policy if ever one existed).⁷⁸ Essential to understand is that the nature of an objective test inherently gives license to courts to roam freely from the facts of a

75. *Id.* at 18.

76. See, for instance, the treatment historians give to *Brown v. Kendall*, 60 Mass. (6 Cush.) 292 (1850). "In their current portrayal of nineteenth-century law, torts scholars have used the rejection of *Rylands*, along with cases from *Brown v. Kendall* to *Ives v. South Buffalo Railway*, to demonstrate how American courts consistently subsidized technology and industry in the nineteenth and early twentieth centuries." Jed Handelsman Shugerman, Note, *The Floodgates of Strict Liability: Bursting Reservoirs and the Adoption of Fletcher v. Rylands in the Gilded Age*, 110 YALE L.J. 333, 377 (2000). See Joseph H. King, Jr., *A Goals-Oriented Approach to Strict Tort Liability for Abnormally Dangerous Activities*, 48 BAYLOR L. REV. 341, 345 (1996); Elizabeth C. Price, *Toward a Unified Theory of Products Liability: Reviving the Causative Concept of Legal Fault*, 61 TENN. L. REV. 1277, 1290 (1994).

Even some judges freely admit *Brown v. Kendall*'s politics and history. *Magrine v. Spector*, 241 A.2d 637, 640 (N.J. Super. Ct. App. Div. 1968) (Botter, J., dissenting); *Ragnone v. Portland Sch. Dist.*, 633 P.2d 1287, 1296-97 (Or. 1981).

77. 383 U.S. at 18. The same kind of naiveté, rooted in a misunderstanding of the negligence test itself, may lead a court to reject the negligence parallel despite the admonitions of the Supreme Court and the Federal Circuit.

[T]he Federal Circuit has stated that the person of ordinary skill in the art is analogous to another fictitious person: the reasonable person used to analyze tort negligence cases. I question the usefulness of that comparison. In negligence cases, judges often can decide whether certain behavior is reasonable by comparing the facts in the particular case to the facts in cases with similar fact patterns. Metaphorically speaking, we know what the reasonable person would do because he or she has been there before. Patent cases involving obviousness ordinarily do not involve anything like a 'similar fact pattern.' The nature of patent law necessarily implies that each situation is new.

Indian Head Indus., Inc. v. Ted Smith Equip. Co., 859 F. Supp. 1095, 1107 n.9 (E.D. Mich. 1994). The problem with case-by-case development, however, is that the expected certainty may prove as elusive in patent law as in negligence law. See *infra* note 87 (discussing the uncertainty of the negligence law standard).

78. MORTON J. HORWITZ, *THE TRANSFORMATION OF AMERICAN LAW, 1870-1960*, at 90 (1992). Horwitz differs with some other legal historians by observing that the legal standard had already changed by the time of the *Brown v. Kendall* decision. The notoriety of the case, according to Horwitz, is not due to any radical shift in doctrine, but rather to Holmes having chosen the case to exemplify the doctrinal change.

case into their economic and policy surroundings. That the negligence formula can have such dramatic economic consequences shows that the formula somehow conceals value preferences which allow a choice between competing economic interests. Whether objective tests generally have that potential seems hardly more arguable.

Unless a court uses a time-machine, the test is clearly, and only, one of hindsight, a necessity the Federal Court nevertheless forbids.⁷⁹ What is the meaning of a proposed hindsight analysis accompanied by a warning against its use? The only conclusion is that the Federal Circuit was encouraging courts, armed with knowledge of the invention (knowledge which necessarily makes the invention appear more obvious than it otherwise might), to be less demanding than they might otherwise be. Leaving aside the underlying confusion of the standard and warning, the test also leaves unanswered the question of how demanding a court should be. This utter flexibility and indeterminacy makes the ordinary practitioner test, like all such objective tests, a completely contingent one, despite the Federal Circuit's insistence that the underlying level of ordinary skill (upon which nonobviousness is based) is a question of fact.⁸⁰ Unsurprisingly, this inherently indeterminate and contingent inquiry endures criticism as a kind of result-oriented jurisprudence and draws well-meant but naive proposals to "legitimize" the process.

Currently, it appears that when the PTO or Federal Circuit is faced with a technically obvious invention that the judges or examiners intuitively recognize should have patent protection (that is, they intuitively respond to the economic nonobviousness of the invention), they are forced to bend the technical nonobviousness doctrine to fit what they perceive to be the only just outcome. By giving the agency and the court a label for what they are doing, the practice can be legitimized and brought out so that it can be discussed without subterfuge.⁸¹

Legitimizing a test expressly designed to accommodate these judgments, just like the test for negligence, is unnecessary. The test's resemblance to the reasonable person standard, particularly as routinely applied to industrial matters, is striking. The Federal Circuit has said that the level of ordinary skill in a particular art depends by reference on the "educational level of the inventor, type

79. The Federal Circuit firmly forbids courts "from using their own insight or, worse yet, hindsight, to gauge obviousness." *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001); *ISCO Int'l, Inc. v. Conductus, Inc.*, No. C.A. 01-487 GMS, 2003 WL 279561, at *6 (D. Del. Feb 10, 2003) (quoting *Okajima*, 261 F.3d at 1355).

80. See *Schneider (Eur.) AG v. Scimed Life Sys., Inc.*, Nos. 94-1317, 94-1410, 94-1456, 1995 U.S. App. LEXIS 9754, at *2 (Fed. Cir. Apr. 26, 1995) ("Although obviousness is ultimately a legal conclusion, it rests upon underlying findings of fact.") (citation omitted).

81. *Boyd*, *supra* note 11, at 339. As to the primary role of commercial success in determining nonobviousness despite its label as a "secondary consideration," see *Demaine & Fellmeth*, *supra* note 22, at 446, 451-52.

of problems encountered in the art, prior art solutions, rapidity of innovation, sophistication of technology, and educational level of active workers in the field.”⁸² Not only does this statement suggest the typical negligence formula as contained in the famous Learned Hand negligence calculus,⁸³ but it noticeably resembles the professional standard of care⁸⁴ formulation that frequently appears in medical malpractice cases. A comparison to the Restatement provision about professionals is instructive: “It is that special form of competence which is not part of the ordinary equipment of the reasonable man, but which is the result of acquired learning, and aptitude developed by special training and experience.”⁸⁵

The application of that provision in, for instance, the health industry, effectively allocates national resources.⁸⁶ By so defining the qualifications of this practitioner, whose knowledge, ability, and skills will be the basis for measuring the inventiveness and thus patentability of the invention, the PTO and ultimately

82. *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 449–50 (Fed. Cir. 1986). See also *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 666–67 (Fed. Cir. 2000). That case provides as follows:

Factors that may be considered in determining the ordinary level of skill in the art include: 1) the types of problems encountered in the art; 2) the prior art solutions to those problems; 3) the rapidity with which innovations are made; 4) the sophistication of the technology; and 5) the educational level of active workers in the field.

Id. But see *Wigley*, *supra* note 38, at 599 (claiming erroneously that *Bausch & Lomb* lists those factors “excluding the inventor”).

83. “Possibly it serves to bring this notion into relief to state it in algebraic terms: if the probability be called P; the injury, L; and the burden, B; liability depends upon whether B is less than L multiplied by P: i.e., whether $B < PL$.” *United States v. Carroll Towing Co.*, 159 F.2d 169, 173 (2d Cir. 1947).

84. This observation is a double-edged sword for the argument made here, because the professional standard is very often less hypothetical than the ordinary reasonable person formula and can become more or less synonymous with custom and practice. To that extent, the professional standard is arguably entirely empirical. The problem of values inherent to empiricism aside, courts routinely deny that the professional standard is quite the same as custom and practice, even though the standard derives from empirical influence. Those courts maintain the right to reject a kind of “quasi” reasonable person standard in connection with actual custom and practice upon a finding that such real-world activity is itself negligent.

85. RESTATEMENT (SECOND) OF TORTS § 299A cmt. a (1965).

86. *Helling v. Carey*, 519 P.2d 981 (Wash. 1974), for instance, is only one of the more notorious examples of a decision, based on the reasonable person or its professional standard variation, that forced an entire industry to restructure its allocation of resources. The Washington Supreme Court, discarding the unquestioned professional standard that the trial court applied, said, “The precaution of giving this test to detect . . . glaucoma . . . is so imperative that irrespective of its disregard by the standards of the ophthalmology profession, it is the duty of the courts to say what is required . . .” *Id.* at 983. The court relied on Learned Hand for support. *Id.* In *In re E. Transportation Co.*, 60 F.2d 737, 740 (2d Cir. 1932), Hand said that ultimately, the reasonableness of a professional standard is a question of law:

[I]n most cases reasonable prudence is in fact common prudence; but strictly it is never its measure; a whole calling may have unduly lagged in the adoption of new and available devices. It never may set its own tests, however persuasive be its usages. Courts must in the end say what is required; there are precautions so imperative that even their universal disregard will not excuse their omission.

The Federal Circuit followed the same course in *Thompson v. Thompson*, 13 Fed. Appx. 925, 928 (Fed. Cir. 2001).

a reviewing court effectively decide how and where to allocate national industrial resources.

Admittedly, the problem with the ordinary practitioner standard, or any variation of the “reasonable person” standard, is not collecting enough facts, or in this case of deciding exactly how much the ordinary practitioner would know and consider. If the problem of nonobviousness were simply one of proof, it would be a solely causal one, raising problems relating to particular and individual cases. But, the problem is not one of proof just as proof is never the issue in negligence law either.⁸⁷

Any focus on problems of proof ignores the evaluative dimension in negligence and to the extent the tests are similar, as the Supreme Court and Federal Circuit insist, that of patent law also. “More evidence is useless unless we know what kind of evidence is relevant, and how it is relevant,”⁸⁸ but any hope that the “right” evidence will or can avoid policy choices is certainly futile. In negligence law, for instance, “value judgments are necessary in order to determine how the legal decisionmaker should select among the many possible meanings of the ‘burdens’ of a precaution, or the ‘benefits’ of taking a precaution (including the ‘reasonably foreseeable’ probability of harmful outcomes, and the ‘severity’ of the possible outcomes).”⁸⁹ One could probably observe how the ordinary practitioner would consider an innovation obvious by considering how much effort to apply to the problem while assessing how likely an innovation is to result and how useful it is

87. When considering the faith articulated in *John Deere* that the ordinary practitioner standard would, in the end, yield some consistency, one cannot help but reflect on the notorious short line of cases (two) from *Baltimore & Ohio R.R. Co. v. Goodman*, 275 U.S. 66 (1927) to *Pokora v. Wabash Railway Co.*, 292 U.S. 98 (1934). In *Goodman*, Justice Holmes had the occasion to demonstrate, or so he apparently thought, that however uncertain the reasonable person standard appeared, the genius of the common law would eventually yield certainty, given enough time, as similar fact situations accumulated in sufficient abundance. *Goodman* was a simple stop, look, and listen case where Holmes assumed he could safely set down a certain rule from the negligence standard. “It is true . . . that the question of due care very generally is left to the jury. But we are dealing with a standard of conduct, and when the standard is clear it should be laid down once for all by the Courts.” *Goodman*, 275 U.S. at 70. Only seven years later, he was forced to eat his words, although Justice Cardozo actually took that meal, when confronted with a stop, look, and listen case at an intersection where stopping would have been even more dangerous than just continuing with caution. The Court could not ignore *Goodman*. “There is no doubt that the opinion in that case is correct in its result. . . . But the court did not stop there. It added a remark, unnecessary upon the facts before it, which has been a fertile source of controversy.” *Pokora*, 292 U.S. at 102. This statement signified the end of the idea of certainty through time, but one wonders why the Court still clung to that faith in *John Deere*, when it asserted that the test’s “difficulties,” like those of negligence, “should be amenable to a case-by-case development.” *Graham v. John Deere Co.*, 383 U.S. 1, 18 (1966).

88. Kenneth W. Simons, *The Hand Formula in the Draft Restatement (Third) of Torts: Encompassing Fairness as Well as Efficiency Values*, 54 VAND. L. REV. 901, 915 (2001).

89. *Id.* For other in-depth analyses of these issues, see Ariel Porat, *The Many Faces of Negligence*, 4 THEORETICAL INQ. L. 105, 106 (2003) (arguing the Hand formula is overly simplified); James A. Henderson, Jr., *Why Negligence Dominates Tort*, 50 UCLA L. REV. 377 (2002) (comparing negligence to strict liability); Stephen G. Gilles, *On Determining Negligence: Hand Formula Balancing, the Reasonable Person Standard, and the Jury*, 54 VAND. L. REV. 813 (2001) (discussing the relationship between the reasonable person standard and the Hand formula).

likely to be. The BPL⁹⁰ calculation of patent law's ordinary practitioner test is certainly the twin of its negligence sibling.

In patent law, this parallelism translates into the question of whether the ordinary practitioner, invested with as many characteristics as the court or PTO may decide, will then consider the invention obvious. In the end, that last step of the problem is really a leap into space. This step produces no fact, unlike the preliminary determinations—for instance, the number of years of postgraduate education a typical researcher might have completed, or the amount of time and money reserved for research by industry (although the Federal Circuit, by insisting that the determination of the level of skill is a question of fact, has rendered that step as potentially arbitrary as any other administrative or trial court finding).⁹¹ The last, and only crucial, decision regarding nonobviousness is whether the examiner, judge, or jury considers the ordinary practitioner capable of imagining the invention—whether it would have been obvious. That decision is not a decision of fact, but of value, as the Federal Circuit has noted: “The ultimate determination of whether an invention would have been obvious . . . is a legal conclusion based on underlying findings of fact.”⁹² This determination is essentially the meaning of invention, and to the extent it is not a factual judgment, it is an entirely indeterminate and contingent one. Actually, to the extent the Federal Circuit correctly labels this a question of law, it becomes an incontestable policy determination rather than a technical or factual question.

Indeed, one could credibly deny the existence of any other way of applying the ordinarily skilled practitioner standard. As with the reasonable person test generally, this test is neither value-neutral nor naively empirical. “In any empirical investigation, value-neutral analysis is a fiction.”⁹³ Nevertheless, the Federal

90. According to Learned Hand's calculus, B, P, and L signify the burden of precautions, probability of consequences, and gravity of injury, respectively. See *supra* note 83. For applications of the Hand formula, see William E. Nelson, *The Moral Perversity of the Hand Calculus*, 45 ST. LOUIS U. L.J. 759, 760 (2001) (applying the formula to the problem of homelessness); Joseph W. Rand, *What Would Learned Hand Do?: Adapting to Technological Change and Protecting the Attorney-Client Privilege on the Internet*, 66 BROOK. L. REV. 361, 418 (2000) (applying the formula to attorneys); Jeffrey J. Rachlinski, *Regulating in Foresight Versus Judging Liability in Hindsight: The Case of Tobacco*, 33 GA. L. REV. 813, 822 (1999) (applying the formula to tobacco producers). In the patent, nonobviousness calculus, the reviewing entity (PTO or federal court) weighs the burden of an increased investment, the probability of achieving innovation, and the foreseeable utility or value of that innovation.

91. The Supreme Court, ruling that Federal Rule 52(a) does not govern judicial review of PTO decisions, has limited the rights of the Federal Circuit to review such decisions to an even greater degree). *Dickinson v. Zurko*, 527 U.S. 150, 161 (1999). See also *Mazzari v. Rogan*, 323 F.3d 1000, 1004–05 (Fed. Cir. 2003) (applying the post-*Zurko* standard for reviewing PTO decisions).

92. *In re Beigel*, 7 Fed. Appx. 959, 961 (Fed. Cir. 2001). *Accord* *Brown & Williamson Tobacco Corp. v. Philip Morris, Inc.*, 229 F.3d 1120, 1131 (Fed. Cir. 2000) (“[T]he ultimate determination of whether an invention is obvious is a legal question based on the totality of the evidence.”); *Boehringer Ingelheim Vetmedica, Inc. v. Schering-Plough Corp.*, 320 F.3d 1339, 1353 (Fed. Cir. 2003) (“Obviousness is a question of law based on underlying factual determinations.”).

93. Linda Ross Meyer, *Just the Facts?*, 106 YALE L.J. 1269, 1273 (1997) (reviewing DON DEWEES ET AL., *EXPLORING THE DOMAIN OF ACCIDENT LAW: TAKING THE FACTS SERIOUSLY* (1996)).

Circuit, probably in much the same manner as courts struggling with applying a so-called objective test in a value-neutral way, warns that the test should not partake of hindsight: "In the first place, the level of skill in the art is a prism or lens through which a judge or jury views the prior art and the claimed invention. This reference point prevents these deciders from using their own insight or, worse yet, hindsight, to gauge obviousness."⁹⁴ As already observed, however, this admonition is disingenuous and almost foolish.

If the test is particularly akin to a special kind of negligence, that of the professional standard, its merit is that, like the professional standard, being informed by industry custom and practice makes it less malleable and more resistant to second-guessing. This appearance, however, is deceptive and fallacious. While also true that the Federal Circuit has insisted that the ordinary practitioner standard is entirely hypothetical, the court nevertheless demands that the PTO and district courts carefully (but apparently hypothetically) articulate an industry standard based on actual custom and practice, not on hypothetical values.

The professional negligence standard appears to be, like the practitioner of ordinary skill test, "a standard of care defined by the prevailing custom in the profession" instead of by the hypothetical reasonable person.⁹⁵ Manipulating a standard that actual practice defines might seem difficult, but the professional standard, supposedly anchored to actual practice, is notoriously subject to judicial preferences about what should be, as opposed to what is, the actual practice. "[S]ome jurisdictions which have adopted a professional standard of care nonetheless expressly recognize that a plaintiff may prevail on a negligence claim by showing that the entire industry was negligent."⁹⁶ The same type of decision arises when the PTO or a court holds an innovation that is indisputably obvious to nevertheless be patentable, thus amounting to a massive ratcheting down of the standard of obviousness as applied to that industry.⁹⁷ To the extent patent cases are similarly subject to such pressures, or where those pressures convince a court or the PTO that an invention is obvious or nonobvious despite what the facts otherwise indicate, the test remains indeterminate, contingent, and contextual.⁹⁸ Naturally, the Federal Circuit's decisive view that the question is legal rather than factual tends to moot further criticism.⁹⁹

94. *Al-Site Corp. v. VSI Int'l, Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999). *Accord* *Okajima v. Bourdeau*, 261 F.3d 1350, 1354–55 (Fed. Cir. 2001) (citing *Al-Site*, 174 F.3d at 1324).

95. *Advincula v. United Blood Servs.*, 654 N.E.2d 644, 650–51 (Ill. App. Ct. 1995), *rev'd on other grounds*, 678 N.E.2d 1009 (Ill. 1996).

96. *Id.* at 651.

97. See *supra* note 52 (discussing "subterfuge").

98. Indeed, the observations of Boyd, Ebert, and Wigley, *supra* notes 11, 18, & 38, and the results in cases such as *Thompson v. Thompson*, 13 Fed. Appx. 925, 928 (Fed. Cir. 2001) and even *Cuno Engineering Corp. v. Automatic Devices Corp.*, 314 U.S. 84 (1941), *supra* notes 86 & 46, reflect the tendency of reviewing bodies to substitute their judgment for what the facts might otherwise seem to compel.

99. The Supreme Court's decision in *Dickinson v. Zurko*, 527 U.S. 150 (1999), however, will partially dampen, though not moot, this question. See *supra* note 91.

D. Determining the Level of Skill

According to *John Deere*,¹⁰⁰ an assessment of the level of skill that the ordinary practitioner possesses must precede the determination of nonobviousness. Determining that level of skill is rather prosaic. Recall that the Federal Circuit instructs courts to establish the “educational level of the inventor, type of problems encountered in the art, prior art solutions, rapidity of innovation, sophistication of technology, and educational level of active workers in the field.”¹⁰¹

The Federal Circuit decisions underscore the idea that the test of the ordinary practitioner is entirely contingent, uncertain, and indefinite. In *Standard Oil Co. v. American Cyanamid*, the court said that the ordinary practitioner is one possessing only “conventional wisdom . . . and is not one who undertakes to innovate, whether by patient, and often expensive, systematic research or by extraordinary insights”¹⁰² As one commentator asserts, the ordinary practitioner is therefore “somewhat of a plodder”¹⁰³ This “conventional wisdom” is a far cry from the “flash of creative genius”¹⁰⁴ test and is intended to make patentability far more likely. However, to the extent that test applies differently to different industries,¹⁰⁵ it becomes the source of national industrial policy. Commentators are not timid about suggesting such differentials. One astonishingly candid suggestion, a call to relax the test of nonobviousness and allow “biotechnological inventions [to] be given patents more easily in order to foster the industry’s growth,”¹⁰⁶ demonstrates the intimate, though sometimes barely recognized, connection between that test and national industrial policy.

Additionally, the assessment of skill, with all its apparent determinancy, is rife with possibilities for manipulation. Consider this normal stipulation of a practitioner’s skill level:

[A] person possessing the stipulated level of ordinary skill would have completed at least several college-level courses in computer science or electrical engineering, would have been employed for

100. *Graham v. John Deere Co.*, 383 U.S. 1 (1966).

101. *Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 450 (Fed. Cir. 1986). *But see* Wigley, *supra* note 38, at 598 (asserting that *Bausch & Lomb* lists those factors “excluding the inventor,” although the court’s opinion clearly lists the inventor’s education.).

102. *Standard Oil Co. v. Am. Cyanamid Co.*, 774 F.2d 448, 454 (Fed. Cir. 1985). The court applied the same standard in *Schneider (Eur.) AG v. Scimed Life Sys., Inc.*, Nos. 94-1317, 94-1410, 94-1456, 1995 U.S. App. LEXIS 9754, at *3 (Fed. Cir. Apr. 26, 1995).

103. Ebert, *supra* note 19, at 22.

104. *Cuno Eng’g Corp. v. Automatic Devices Corp.*, 314 U.S. 84, 91 (1941).

105. The recent PTO practice of applying a more demanding standard to business method patents controversially seems to treat one field of technology differently than all others in possible violation of TRIPS. Specifically, the PTO mandates “[a] new second-level review of all allowed applications in Class 705,” which is essentially the business methods class. U.S. PATENT AND TRADEMARK OFFICE, USPTO WHITE PAPER: AUTOMATED FINANCIAL OR MANAGEMENT DATA PROCESSING METHODS (BUSINESS METHODS), Section V.D., (2000), available at <http://www.uspto.gov/web/menu/busmethp/quality.htm>.

106. Boyd, *supra* note 11, at 313.

several years in the field of engineering, developing and designing gaming devices, and would have had some knowledge of probability theory, random numbers, and computer programming.¹⁰⁷

In this case, the PTO and the courts decided that, given an appropriate investment in industry such that employees received this education, training, experience, and employment, normal work product is not entitled to a patent monopoly. However, any innovations by employees with greater qualifications or within enterprises that invest enough more to exceed this level, would be more deserving. One can imagine, since both parties agreed to this stipulation, that the plaintiff patent owner was urging that the industry need only invest in minimal qualifications, while the defendant infringer urged that the industry, to merit patent monopolies, should employ college graduates at a minimum and perhaps even those with doctorates. When the PTO and a reviewing court decide—or in this case, given the stipulation, accept—that this minimal level of investment is worthy of a patent monopoly, they impose a national industrial policy that rewards a very specific allocation of national resources, at least in this particular sector or “art.” The patent subsidy, in other words, is contingent upon a very specific level of industrial development, and this contingency is the result of a calculus in which this decision seems disguised and about which those performing the calculus seem entirely ignorant. Most important, this decision involving solely non-technological features forms the basis for an eventual decision regarding whether an innovation is a “patentable invention.”

The unavoidable conclusion is that the test of nonobviousness and the level of ordinary skill are subject to an almost infinite flexibility and are highly manipulable. Even so, Federal Circuit decisions occasionally approach a level of incoherence that the flexibility of governing law simply cannot explain. For instance, in *Thompson v. Thompson*,¹⁰⁸ the PTO found obvious a claimed invention for a street light designed to avoid sky light contamination by extending the reflector upward (how else, one might ask) beyond a certain point. The Federal Circuit agreed that such a simple and arguably intuitive design was obvious, but its explanation is baffling.

The level of ordinary skill in the art of outdoor lighting design appears to be not especially high. There are few differences between the claimed invention and the scope and content of the prior art We conclude that substantial evidence supports the Board’s determination that one of ordinary skill in the art would have been motivated to modify the industry standard We

107. *WMS Gaming Inc. v. Int’l Game Tech.*, 184 F.3d 1339, 1357–58 (Fed. Cir. 1999).

108. 13 Fed. Appx. 925 (Fed. Cir. 2001).

therefore affirm its judgment that the invention as a whole would have been obvious¹⁰⁹

What could the Federal Circuit have been thinking? Why did the court observe that the level of skill was “not especially high?” Where the level of skill is not high, innovations are more likely nonobvious. Perhaps the court meant that the level of innovations in this field are so rudimentary that they are routinely obvious. That conclusion, however, flies in the face of the test for nonobviousness, the measurement of which depends upon the level of skill of ordinary practitioners, including practitioners who, as here, are perhaps not especially skillful.¹¹⁰ This statement casts doubt on whether the Federal Circuit, the court vested with almost total responsibility for United States patent policy, understands the most central doctrine of patent law. If so, the test for nonobviousness becomes flexible not only because the test is inherently indeterminate, but because the court vested with reviewing authority has an incomplete grasp of the ruling law.¹¹¹ To give credit to the court, another interpretation of *Thompson* is that the Federal Circuit feels free to reject an industry standard that would characterize as nonobvious what the court feels to be an undeserving innovation. That line of reasoning is the basis for this entire Article.

These decisions cannot really set industrial policy if merely reflecting existing levels of investment. However, as *Thompson* illustrates, the courts hardly feel bound to vindicate decisions of industries whose judgment they apparently question. Two locations exist within the nonobviousness calculus in which a departure from existing practice is inevitable. The first results from the existence of more than one level of qualifications. Any sizeable industry, perhaps even small ones, will have various levels from which the PTO or reviewing court can choose the most appropriate. Even when they choose, they frequently choose a range that inevitably gives carte blanche to a conclusion of either obviousness or nonobviousness: “The unchallenged level of ordinary skill in the art was high, a minimum of a bachelor’s degree in electrical engineering often being accompanied by a master’s degree and several years of design experience.”¹¹²

Within that framework, does a court apply the highest possible standard, that of master’s degrees and several years of experience, or something closer to their minimum bachelor’s degree finding? Having chosen that level, a *factual* decision

109. *Id.* at 928 (emphasis added).

110. One surely must wonder whether the Federal Circuit here revealed, however unintentionally, that it is engaged in exactly that industrial restructuring that *Helling v. Carey* notoriously criticized, a restructuring inherent in the flexibility of the professional standard, let alone the infinitely more flexible reasonable person standard. The Court may simply have misspoken, actually intending to assert that, while the level was not very high, it certainly exceeded the skill necessary to achieve this pedestrian advance.

111. Boyd supports this conclusion, believing the Federal Circuit resorts to subterfuge when so inclined. See *supra* note 52. If *Thompson* is any measure, however, the court need not resort to subterfuge to avoid a doctrine of which it lacks a full mastery.

112. *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 1572 (Fed. Cir. 1983).

about what would be “obvious” at such a level is unimaginable. The court must make a prediction (from hindsight of course) regarding what one with that level of qualifications would think. Since evidence about the only one who demonstrably did think about the issue—the inventor—is inadmissible, the conclusion is a leap into space. Whether one becomes more or less demanding when making that prediction simply is not subject to constraint. Even an entirely empirical measurement, in this context, is hardly “value-neutral.”¹¹³ Unless industries ignore judicial decisions—and industries clearly acknowledge that decisions of the PTO and federal courts govern their investment choices¹¹⁴—the court’s approach is surely an industrial policy. The question of whether that policy is rational or democratic is open for debate.

E. The Impact of the Nonobviousness Inquiry: Its Economic and Political Significance

Patent law screens innovations with four basic tests: subject matter,¹¹⁵ nonobviousness,¹¹⁶ novelty,¹¹⁷ and utility.¹¹⁸ Subject matter (the initial determination of whether a particular innovation is even eligible for patent consideration by being, for example, a question of business methods, living

113. Meyer, *supra* note 93, at 1273.

114. “Effective patent and copyright protection: intellectual property is the lifeblood of venture-backed high tech and biotech firms.” *Beyond the Tax Cut: Unleashing the Economy: Hearing Before the House Subcommittee on Domestic Monetary Policy, Technology, and Economic Growth of the Committee on Financial Services*, 107th Cong. 49 (2001) (statement of E. Floyd Kvamme, Co-Chairman of the President’s Council of Advisors for Science and Technology). “Wall Street attaches enormous significance to gene patents. When a statement last spring by President Clinton and British Prime Minister Tony Blair was briefly misunderstood as portending changes in patent law, billions of dollars evaporated from the stock market overnight.” Justin Gillis, *Gene Research Success Spurs Profit Debate*, WASH. POST, Dec. 30, 2000, at A1. The Federal Circuit strongly considers whether patent doctrine, such as the doctrine of equivalents, has a substantial effect upon investment. See *Hilton Davis Chem. Co. v. Warner-Jenkinson Co., Inc.*, 62 F.3d 1512 (Fed. Cir. 1995), *rev’d*, 520 U.S. 17 (1997); *Rite-Hite Corp. v. Kelley Co., Inc.*, 56 F.3d 1538 (Fed. Cir. 1995); *Laitram Corp. v. NEC Corp.*, 952 F.2d 1357 (Fed. Cir. 1991). See also Anita Varma & David Abraham, *DNA Is Different: Legal Obviousness and the Balance Between Biotech Inventors and the Market*, 9 HARV. J.L. & TECH. 53, 55 (1996). An important corollary is that other countries apparently believe that the “right” patent regime will attract foreign investment. “National differences in patent regimes that affect the level of IP protection in each country clearly impact the willingness and ability of firms to invest in joint international research ventures, manufacturing, and other forms of investment.” Robert Dugal, *Pharmaceutical Research Investment*, 53 CAN. CHEM. NEWS 28 (2001). Notably, however, in an otherwise favorable approach to strong domestic IP systems, a PTO Primary Examiner nevertheless pointed out the reality that “developing countries in Sub-Saharan Africa and Eastern Europe which ha[d] adopted strong IPR systems ha[d] attracted little FDI while China, Brazil, Argentina and Thailand ha[d] attracted high levels of FDI despite their weak IPRs.” Jean Raymond Homere, *Intellectual Property Rights Can Help Stimulate the Economic Development of Least Developed Countries*, 27 COLUM. J.L. & ARTS 277, 288 (2004).

115. 35 U.S.C. § 103(a) (2000).

116. § 103(b).

117. § 101.

118. *Id.*

organisms, or computer programs), subject to measurement under the idea/application dichotomy, inevitably involves a balancing of the policy evaluation of the competitive possibilities against the perceived “value” of the art or industrial sector, the value of continued competition, and the price the public must expect to pay.¹¹⁹ Thus, subject matter is important, because through the analysis, the system decides whether an innovation is even eligible for the patent monopoly or, alternatively, is merely an unpatentable concept (“laws of nature, physical phenomena, and abstract ideas”).¹²⁰ Although this decision has been historically important, an erroneous Federal Circuit interpretation of governing Supreme Court precedent has limited the range of choices.¹²¹ Of the three remaining tests (novelty,

119. Laws of nature, physical phenomena, and abstract ideas are not patentable, because monopolies over such essentials would impose an insuperable burden on industry. No one could compete with a monopolized idea, and the public would pay the intolerable price of foregoing all competition. Few, if any, can doubt “the allocative effects . . . even from the narrow viewpoint of efficiency,” involved in the subject matter inquiry. Lloyd L. Weinreb, *Copyright for Functional Expression*, 111 HARV. L. REV. 1149, 1247 (1998). For instance, “many noted the significant impact on the pharmaceutical and biotechnology industries that resulted from *Chakrabarty*, a Supreme Court decision affirming the expansive scope of patentable subject matter.” Toshiko Takenaka, *Patent Infringement Damages in Japan and the United States: Will Increased Patent Infringement Damage Awards Revive the Japanese Economy?*, 2 WASH. U. J.L. & POL’Y 309, 366 (2000). The values extend beyond the economic realm. “Here too, the question is at once difficult and urgent: do we need new and activist genetic policy, or can traditional norms be shaped in the courts to accommodate new problems?” Glenn McGee, *Foreword: Genetic Exceptionalism*, 11 HARV. J.L. & TECH. 565, 569 (1998). The values do, however, always involve the economic calculation of an expanded or contracted monopoly. “[W]hat type of ‘legal monopoly’ should be granted to an innovator whose significant contribution to the public welfare can be diminished quickly by a competitor’s development of an improved product or technique?” Kevin J. McGough & Daniel P. Burke, *A Case for Expansive Patent Protection of Biotechnology Inventions*, 6 HARV. J.L. & TECH. 85, 86 (1992).

120. The Federal Circuit has interpreted *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980), which held a process involving living micro-organisms patentable for its nonnatural combination, meaning no limits exist outside of the statute itself as to the proper subject of a patent. For instance, the court stated that “it is improper to read limitations into § 101 on the subject matter that may be patented where the legislative history indicates that Congress clearly did not intend such limitations.” *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368, 1373 (Fed. Cir. 1998); see also *Arrhythmia Research Tech., Inc. v. Corazonix Corp.*, 958 F.2d 1053, 1064–65 (1992) (providing that, “in the absence of legislated limits on the meaning of the Act, courts should not presume to construct limits). *Chakrabarty*, however, did not interpret the 1952 Act as eliminating all common-law rules, such as the prohibition of business method patents, and courts can consistently, and certainly in accord with traditional rules of statutory construction, read the Patent Act in conjunction with the judicial rules in effect at the time of passage. The only exceptions are those rules that the Act explicitly overruled, such as the last sentence of the first paragraph of 35 U.S.C. § 103 (overruling *Cuno Eng’g Corp. v. Automatic Devices Corp.*, 314 U.S. 84 (1941)). More important, *Chakrabarty* acknowledged that the limits upon subject matter are not exclusively in the text of the statute. The Court provided, “This is not to suggest that § 101 has no limits or that it embraces every discovery. The laws of nature, physical phenomena, and abstract ideas have been held not patentable.” 447 U.S. at 309. Why the Federal Circuit interprets *Chakrabarty* as forbidding any limits not present in the statute when the Supreme Court itself identified three such limits is puzzling.

121. The Federal Circuit has misread *Chakrabarty* to mandate patentability of everything “under the sun” and to banish all judicial exceptions. This interpretation is clearly a misunderstanding, since *Chakrabarty* itself mandated three very broad judicial exceptions—“laws of nature, physical phenomena, and abstract ideas.”

utility, and nonobviousness),¹²² only nonobviousness (the classical test of “invention”¹²³) presents the kind of serious dispute also inherent to the subject matter inquiry. The other two tests of invention—novelty and utility¹²⁴—are either purely factual inquiries or present virtually no serious disputed issues¹²⁵ and seem so obviously factual as to not raise the question of industrial policy. Thus, only the subject matter and nonobviousness inquiries are decisive, in a political and socio-economic sense, to the grant of patent rights.

As discussed, nonobviousness intuitively seems to address the process by which the inventor made the discovery (an inquiry the statute disallows¹²⁶). The analysis considers the general competitive nature of the field and measures the social value of competition (inevitably subjectively evaluated) against the required incentive to produce new goods. In the end, the court effectively sets the inventing entity’s “wage” or “profit,” which the public then pays.¹²⁷ The accomplishment of

122. 35 U.S.C. §§ 101, 103.

123. “The major distinction is that Congress has emphasized ‘nonobviousness’ as the operative test of the section, rather than the less definite ‘invention’ language of *Hotchkiss* that Congress thought had led to ‘a large variety’ of expressions in decisions and writings.” *Graham v. John Deere Co.*, 383 U.S. 1, 14 (1966).

124. 35 U.S.C. § 101.

125. Genuine policy disputes do arise in the determination of novelty and utility. With regard to the former, the borders clearly allow dispute, but the heartland is generally certain and definite. By contrast, nonobviousness, which is inherently political, is essentially all border with no definite or certain territory. Utility offers some opportunity to make serious, even extraordinary, value judgments although recent case law has reduced the ordinary issue of utility into a pedestrian exercise. Nevertheless, in the absence of any attempt to demonstrate utility, or in cases where utility is entirely speculative, the Supreme Court has employed the otherwise minimal utility requirement to prevent fishing expeditions. See *Brenner v. Manson*, 383 U.S. 519 (1966).

126. The infamous last sentence of the first paragraph of section 103, adopted in 1952, instructs the PTO and courts to ignore “the manner in which the invention was made,” 35 U.S.C. § 103(a), cementing Congressional rejection of the “flash of creative genius” requirement from *Cuno Engineering Corp. v. Automatic Devices Corp.*, 314 U.S. 84 (1941).

127. The “wage” that the commercialization of the patent monopoly guarantees is an exception to the general rule that all are free to compete in a market in which intangibles are presumably available to the public. *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150–51 (1989). The *Bonito Boats* Court explained:

Taken together, the novelty and nonobviousness requirements express a congressional determination that the purposes behind the Patent Clause are best served by free competition and exploitation of either that which is already available to the public or that which may be readily discerned from publicly available material.

....

... The novelty and nonobviousness requirements of patentability embody a congressional understanding, implicit in the Patent Clause itself, that free exploitation of ideas will be the rule, to which the protection of a federal patent is the exception.

Accord *Wilhelm Pudenz, GmbH v. Littlefuse, Inc.*, 177 F.3d 1204, 1208 (11th Cir. 1999) (quoting *Bonito Boats*, 489 U.S. at 150–51); *Escada AG v. The Limited, Inc.*, 810 F. Supp. 571, 573 (S.D.N.Y. 1993) (quoting the same language).

this complex and rather fundamental intrusion into the public domain depends upon language that claims an exclusively private (property) character.¹²⁸

128. Copyright is the same. Originality itself, with a minimal definition, appears either highly objective or irrelevant. 17 U.S.C. § 102 (2000). See *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 345–46 (1991). However, considering originality in conjunction with the copyrightability of derivative works or copies, as well as the idea-expression dichotomy, the result is similar to that of patent law. Whether something is in the realm of copyrightable ideas depends upon its subjectively perceived value as balanced against social needs. See *Computer Assocs. Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693, 696 (2d Cir. 1992). See also *Bowers v. Baystate Techs., Inc.*, 320 F.3d 1317, 1324 (Fed. Cir. 2003) (discussing the “scope of copyright”). The decision of the court will, in the end, set the price of the product after consideration of the possibilities of continued competition, “blocking,” and the need for incentive. That resulting decision turns on the court’s political views regarding society and even human nature, because the need for incentive will hinge on an optimistic, as opposed to a pessimistic, view of human nature. Fair use considers, perhaps most dramatically, the economic conditions surrounding the authorship, as well as the parties’ needs in relation to society. The economic impact is “the single most important element of fair use.” *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 574 (1994) (quoting *Harper & Row, Publishers, Inc. v. Nation Enters.*, 471 U.S. 539, 566 (1985)). Most important, with the possible exception of fair use, these calculations supposedly consider something inherent about the work and the author, rather than the competitive environment. Weinreb may have suggested this idea when he wrote, “The boundary of copyrightable subject matter does not carry its rationale on its face . . .” Weinreb, *supra* note 119, at 1210.

The situation differs in trademark law only to the extent that classical doctrine is binding. Strict trademark law allows for little external balancing. However, modern trademark law reveals a massive intrusion into public matters under the guise of private rights. Whether a mark is generic, or even descriptive, depends upon a concealed judgment (Weinreb’s hidden calculation) concerning the desirability for further competition, because the inquiry focuses on the degree of reasonable alternatives: Is the subject of proposed protection “the” descriptive name for the product? The determination depends upon the court’s willingness to force consumers to use “other” terms. See, e.g., *Qualitex Co. v. Jacobson Prods. Co.*, 514 U.S. 159, 168–69 (1995) (allowing, under the so-called “color depletion” theory, the appropriation of colors, unless the public has no more colors available). Likewise, whether the definition of a “product” or “service” is broad enough to include, for instance, T-shirts, or narrowly to include only T-shirts with a certain mark, will determine the dispute. The court’s definition of the market depends upon its subjective attitude towards the relative strength of marketers vis-a-vis consumers. See, e.g., *Clicks Billiards Inc. v. Sixshooters Inc.*, 251 F.3d 1252, 1265 (9th Cir. 2001) (finding likelihood of confusion partly based upon the strength of the mark, a factor that depends somewhat upon the amount of the proprietor’s investment); *MB Fin. Bank, N.A. v. MB Real Estate Servs.*, No. 02-C-5925, 2003 U.S. Dist. LEXIS 21051 *18 (E.D. Ill. Nov. 20, 2003) (basing the strength of a mark on, among other factors, “the amount of money spent on advertising the mark”). That definition is essentially a public matter, yet its determination depends upon a private, objective framework which claims to consider solely the term or the product. However, trademark law, which is even less open than either patent or copyright law, appears to be non-monopolistic and even non-regulatory. By putting the debate in notions of monopoly, the claim that trademark is anti-competitive becomes trivial, for the monopolization of a word or symbol is hardly important. In terms of simple competition, the product differentiation and obstacles to entry that result from the monopolization of a term become potentially far more powerful than the direct monopolization of a product through patent or copyright. This result is due to the relatively lesser monopoly over the product in trademark law continuing in perpetuity. Although trademark holders must renew their rights every ten years, their ultimate term is limitless, 15 U.S.C. § 1058 (2000), whereas the admitted monopoly over the product of patent or copyright law expires in twenty years, 35 U.S.C. § 154 (2000), or, at the most, approximately ninety-five years, 17 U.S.C. § 302 (2000).

The patent statute clearly determines, or more accurately, allows courts, in a more decentralized manner, to determine the allocation of productive resources. Nearly forty years ago, Machlup observed that the patent system determines “the overall allocation of productive resources in a developing economy and . . . whether . . . the allocation to industrial research . . . is deficient, excessive, or just right.”¹²⁹

One way to understand more fully how the patent regime constitutes a government subsidy and national industrial policy is to note its similarity to the well-known “matching fund” subsidy system that both the public and private sectors employ. Under “matching fund” systems, a patron or government agency agrees to subsidize an activity according to a predetermined proportion of funds invested (or, in the case of a nonprofit organization such as a cultural or charitable organization, funds raised). Thus, for each dollar the enterprise invests, the patron offers to match that dollar with a certain amount, a proportion which varies according to the patron’s demands. In some ways, the amount the enterprise raises or invests represent a kind of “good faith” commitment and assurance that the enterprise is worthy of the subsidy. The proportion of matching funds to privately raised funds represents the confidence of the patron in the enterprise, as well as a demand upon the enterprise to prove its worth.¹³⁰

In that sense, the nonobviousness calculation simply represents the proportion, demand, or confidence, that the government as patron assigns to the enterprise. A high nonobviousness threshold is equivalent, in this analysis, to a demand that the enterprise invest more in its own activities. When the standard of nonobviousness is low, the government essentially says that the enterprise—or, in this case, the entire industry or “art”—need not invest much of its own funds. A very low nonobviousness threshold signals a decision to provide massive subsidization of the entire industry.

Consequently, the nonobviousness inquiry represents a decision industry by industry, or art by art, to subsidize certain industries virtually entirely, to fund others more or less equivalently, and to require still others to proceed without

129. STAFF OF SENATE COMM. ON THE JUDICIARY, 85th Cong., AN ECONOMIC REVIEW OF THE PATENT SYSTEM 445 (2d Sess. 1958) (authored by Fritz Machlup).

130. Although generally associated with private giving, matching funds has some legal significance, mostly in tax law, where some suggest a conversion of the present charitable donation tax deduction into a kind of matching fund for reasons of fairness and equity. See Paul R. McDaniel, *Federal Matching Grants for Charitable Contributions: A Substitute for the Income Tax Deduction*, 27 TAX L. REV. 377, 396–97 (1972); Boris I. Bittker, *Charitable Contributions: Tax Deductions or Matching Grants?*, 28 TAX L. REV. 37, 38 (1972); Frances R. Hill, *Targeting Exemption for Charitable Efficiency: Designing a Nondiversion Constraint*, 56 SMUL REV. 675, 708–09 (2003). Actual matching fund programs also exist between government and industry. See 15 U.S.C. § 278n (2000); 15 C.F.R. §§ 290.3(e), 290.5(a)(3)(ii), 291.4(f). The Commerce Department’s Advanced Technology Program, which provides matching grants to industry, is an explicit example of national industrial policy and is the target of an especially vitriolic reaction in legal literature. See, e.g., Roger Pilon, *On the Folly and Illegitimacy of Industrial Policy*, 5 STAN. L. & POL’Y REV. 103, 105 (1993) (likening former President Clinton’s extreme-centrist policies to “the far-reaching forms that have characterized the socialist world”).

government assistance. Fashioning a more ruthless or at least determined national industrial policy would be difficult.

The patent system has drawn this line rather casually for two centuries. While our system does not grant patents to applications without any examination at all, the PTO process remains cursory.¹³¹ The social cost of this approach, which depends upon a calculus that favors granting more rather than fewer questionable patents,¹³² troubled even Jefferson:

Instead of refusing a patent in the first instance . . . the patent now issues of course, subject to be declared void on such principles as should be established by the courts of law. . . . [H]owever . . . we might in vain turn over all the lubberly volumes of the law to find a single ray which would lighten the path of the mechanic or the mathematician. It is more within the information of a board of academical professors, and a previous refusal of patent would better guard our citizens against harassment by law-suits.¹³³

131. Everyone seems to recognize that the PTO is overworked and underfunded. See Nancy J. Linck et al., *A New Patent Examination System for the New Millennium*, 35 HOUS. L. REV. 305, 307–08 (1998); Gerald J. Mossinghoff & Vivian S. Kuo, *Post-Grant Review of Patents: Enhancing the Quality of the Fuel of Interest*, 85 J. PAT. & TRADEMARK OFF. SOC'Y 231, 232 (2003). The dominant theory governing our patent regime is that the courts are ultimately responsible for policing the bona fides of patents. One author asks,

Does the invalidation of patents coming into the courts indicate a flaw in the patent system? Or does it suggest that the two tribunals are effectively serving different functions—the Patent and Trademark Office to grant patents on the basis of prior art appraisals, and courts to weed out subject matter that more highly-focussed factfindings—and subsequently-occurring events—prove to have been obvious?

GOLDSTEIN, COPYRIGHT, PATENT, TRADEMARK AND RELATED STATE DOCTRINES 384 (rev. 3d ed. 1993). Indeed, just as it has been asserted that almost any prosecutor could get an indictment against a ham sandwich, see *Do We Need Grand Juries?*, N.Y. TIMES, Feb. 18, 1985, at A16 (reporting that Chief Justice Wachtler favored abolishing New York's grand juries from most felony cases, because grand juries "would 'indict a ham sandwich' if the district attorney asked nicely"), Patent Office statics themselves establish themselves that almost any patent lawyer can probably get one patented. Those numbers reveal that just about every patent application is eventually approved by the PTO and a patent ultimately issues. "[V]irtually all patent applications are successful in the end. . . ." Mickey Davis, *Summary of "Continuing Patent Applications and Performance of the U.S. Patent and Trademark Office,"* by Cecil D. Quillen, Jr. (Cornerstone Research) and Ogden H. Webster, 11 Fed. Cir. B.J. (2001-2002), in TIIP Newsletter, Issue 2 003.1 (2003), available at http://www.researchoninnovation.org/tiip/archive/2003_1_b.htm.

132. In 1992, the PTO solicited comments on a proposed rule relaxing the ethical requirements of patent attorneys. One comment called for stiffening rather than relaxing the rule, since denying some good patents is preferable to burdening the public with unmerited monopolies. The PTO's response ignored the unavoidable dilemma of having to choose between issuing some bad patents or denying some good ones, instead rejecting the suggestion with the startling *non sequitur*: "The Office strives to issue valid patents." Response to and Analysis of Comments, 57 Fed. Reg. 2023 (Jan. 17, 1992).

133. Letter from Thomas Jefferson to Mr. Isaac M'Pherson, *supra* note 28, at 182.

Despite two centuries of concern, modern commentators seem to embrace the essentially cavalier approach of a seemingly unchanging United States patent system.¹³⁴ The Federal Circuit has actually embraced the situation Jefferson deplored.¹³⁵ The situation tends to deny that patent law derives from the application of a utilitarian calculus,¹³⁶ and it emphasizes the kind of private rights responsible for the “harassment” Jefferson noted.

History demonstrates that patent grants are substantially political decisions. During the post-New Deal era, judicial challenges routinely invalidated patents, perhaps in part due to a somewhat skeptical national attitude towards business attributable to the events of the Depression years. Since the creation of the Federal Circuit during the pro-business 1980s, however, the country has entered a “pro-patent” cycle that its boosters have coined “The Era of the Patent.”¹³⁷

This cycle has few possible explanations. Either the earlier period was “correct,” and applicants now simply submit a higher proportion of truly inventive innovations; the earlier period was “incorrect,” and the Federal Circuit now “correctly” applies the law; or both periods are “correct,” but the law of patents itself is extraordinarily flexible and embraces both. The first interpretation seems to defy common sense in presuming that industry has somehow been “born again” or that practitioners of an earlier era were less competent than current practitioners. Either of the two remaining interpretations indicates the political responsiveness of patent law.

134. Suggestions for reform often propose less, rather than more, examination. See Linck et al., *supra* note 131, at 318.

135. The Federal Circuit is notorious for validating patents that courts would have invalidated in earlier eras. See Paul M. Baisier & David G. Epstein, *Resolving Still Unresolved Issues of Bankruptcy Law: A Fence or an Ambulance*, 69 AM. BANKR. L.J. 525, 539 (1995) (questioning whether the Federal Circuit may be victim of the “capture” phenomenon); Steven Chersensky, *A Penny for Their Thoughts: Employee-Inventors, Preinvention Assignment Agreements, Property, and Personhood*, 81 CAL. L. REV. 595, 614 n.86 (1993) (noting that the Federal Circuit is more “pro-patent” than prior courts or the Supreme Court); Chad King, *Abort, Retry, Fail: Protection for Software-Related Inventions in the Wake of State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 85 CORNELL L. REV. 1118, 1124 n.35 (2000) (claiming that “many of the Federal Circuit’s decisions are reversals of patent application rejections by the PTO Board of Appeals”); Lawrence M. Sung, *Intellectual Property Protection or Protectionism? Declaratory Judgment Use by Patent Owners Against Prospective Infringers*, 42 AM. U. L. REV. 239, 248 n.47 (1992) (discussing the Federal Circuit’s “pro-patent owner biases”). See also Eric Schmitt, *Judicial Shift in Patent Cases*, N.Y. TIMES, Jan. 21, 1986, at D2 (describing the Federal Circuit to be “[t]he greatest impetus to the pro-patent shift” in American patent law).

136. Consider Professor Boyle’s description of the system:

The current analysis is massively indeterminate at every stage. It is based on claims for which there is inadequate empirical evidence As a system, it is held together by definitional fiat, despite the fact that the definitions . . . merely reproduce the very tensions they were designed to resolve. Finally, the system is both grounded on and imbued with an ahistorical and romanticized vision of authorial creation: it takes as universal premise that which should be its occasional conclusion.

Boyle, *supra* note 44, at 1533–34.

137. Susan K. Sell, *Intellectual Property as a Trade Issue: From the Paris Convention to GATT*, 13 LEGAL STUD. FORUM 407, 412 (1989) (citing Robert P. Whipple, *A New Era in Licensing*, LES NOUVELLES, Sept. 1987, at 109).

To recapitulate, the ordinary practitioner test shares the vulnerability of the reasonable person test, or of any hypothetical standard, to value judgments. Although it certainly and substantially contributes to the political nature of the test, the assessment of the level of ordinary skill, by either the PTO or a reviewing court, does not draw the most dramatic implementation of these value judgments. Instead, after determining the level of ordinary skill, the PTO or courts must reach a completely hypothetical and therefore unconstrained determination: Would such a person, who does not truly exist, armed with such skill, have thought the invention obvious (a thought that never actually occurred)? No one asked this question at the time of the invention,¹³⁸ so it is not a question of fact, and the actual inquiry occurs in a time and place far removed from the relevant setting. The PTO or court must reach a conclusion about what might have been, and developing this conclusion requires that the court also ask what should have been. An apt description of the system is that of a thought experiment—the would-have-should-have thought experiment.

The would-have-should-have thought experiment seeks to demonstrate that the test of nonobviousness, and that of the practitioner of ordinary skill, is subject to judgments concerning the appropriate amount of industrial investment¹³⁹ and is therefore a form of national industrial policy. The judgment of what should have been fatally infects the inquiry. When the PTO or court must determine whether an ordinary practitioner would have considered an innovation obvious, the court must remember that this consideration is entirely hypothetical. The PTO or court must imagine the event and ask whether the practitioner “would have” reached a conclusion of nonobviousness. One might criticize the industrial policy argument by suggesting that a court which substitutes “should have” for “would have” improperly applies the test. However, doing one without the other is impossible. Since the event never occurred, when the PTO or court imagines whether an ordinary practitioner “would have” reached a conclusion of nonobviousness, shielding that inquiry from what the PTO or court believes the practitioner “should have” done will be impossible.

138. One might characterize the nonobviousness inquiry as answering the unasked question.

139. The ordinary practitioner test is based, in theory, on the actual state of the art, but common-sense notions about what the state of the art should have been will inevitably infect any assessment of what was the actual state of the art. This analysis is a retroactive application of the classic Humean “is-ought” distinction. Hume deemed impossible the task of separating our passions from our reason in distinguishing what is from what ought to be. The ordinary practitioner test simply asks what was, but notions of what should have been will always infect the answer.

Hume has achieved a notoriety of sorts for holding that the mind is not “determin’d by reason” when it makes a causal inference, and for noticing that ought-statements differ from is-statements, that the two are often conflated in moral discourses, and that it “seems altogether inconceivable, how this new relation [of oughtness] could be a deduction from others, which are entirely different from it.”

CHRISTOPHER WILLIAMS, *A CULTIVATED REASON: AN ESSAY ON HUME AND HUMEANISM* 16 (1960) (alteration in original) (internal citations omitted).

First, judges or the PTO will be unable to avoid imagining what should have been done, as is all too human, even if trying to exclude this notion from their conclusion. The real question then is whether the judges or the PTO can ignore their thoughts, an impossibility that the would-have-should-have thought experiment renders evident. Only if the PTO or court has no opinion about what should have been done (in the sense of whether the industry should have invested more or less) can a conclusion about what “would have” been done possibly be immune from the “should have” value judgment. To the extent that the reviewing entity feels, for instance, that more resources should have been invested in a certain sector,¹⁴⁰ and thinks therefore that certain innovations should have been obvious, reaching a judgment regarding what “would have” been done, without influence from its views about what “should have” been done, is impossible. Imagine a PTO or court that believes an innovation should have been obvious given investment of appropriate resources. Now consider its determination of what a practitioner would have thought. If the PTO or court firmly believes that an innovation should have been obvious, how can that body conclude that such innovation nevertheless would not have been? Just as is true of several centuries of negligence law, judgments about an appropriate amount of investment will inevitably be part of the judgment concerning what would have been done.

V. THE PATENT SYSTEM AND THE TRUMP OF PROPERTY

Although based on the test of nonobviousness, the foregoing description of patent law as a form of competition regulation, let alone as a form of national industrial policy, is obviously not the conventional one. Organized patent interests (the patent bar, patent proprietors, and their sponsors) do not espouse that view, but instead habitually offer a more cramped description of patent law. One might call that description the trump of property—a strategy to secure the claim that proprietors can exclusively own patents, and to eliminate any argument that the public has a continuing interest in issued patents.¹⁴¹ That description promotes

140. See *Thompson v. Thompson*, 13 Fed. Appx. 925, 928 (Fed. Cir. 2001).

141. This argument surfaces in the “debate” over whether a patent is a monopoly. Although the Supreme Court, among others, has never faltered in so characterizing the patent monopoly, a small but vocal minority seems determined to argue the point.

As early as the 1920s, U.S. Supreme Court cases can be found saying that a patent is a monopoly, and in a lot of what I think was fairly poor reasoning, even as late as the 1970s, the Court continued to reiterate the theme that a patent is a monopoly It is only in the more recent Supreme Court cases that it has been made clearer that a patent is not a monopoly. It may be an opportunity for “rent seeking,” to use the economist’s term, but it is not a monopoly.

Proceedings of the Sixth Annual Seminar on Legal Aspects of Doing Business in Latin America: Free Markets in Latin America: New Games—New Rules, 8 FLA. J. INT’L L. 191, 256 (1993) (statement of Robert M. Sherwood). “As a side issue, it is worth noting that the holder of a patent does not really have a ‘monopoly’ over the invention in question in a strict sense.” Jacqueline Lipton, *Protecting Valuable Commercial Information in the Digital Age: Law, Policy and Practice*, 6 J. TECH. L. & POL’Y 1, 3 n.9 (2001). However, the Supreme Court has always described the patent monopoly in exactly that manner. See *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 63 (1998); *Eli Lilly & Co. v. Medtronic, Inc.*, 496

patents as just another kind of property, but firmly rejects any suggestion that patent law represents either a form of competition regulation or a national industrial policy. With a firm foundation in free market theories, the strong claim that patents are just another form of property implicitly rejects the idea that patent law serves any regulatory function.

An analysis of market realities in light of free market theories undermines that notion. Surprisingly patents fare badly under a free market lens.¹⁴² The justification for patent law depends on the underlying model of free market competition, even though patents represent a paradoxical reversion to monopoly. The notion that competition polices patents—rendering them either not true monopolies or some benign form of monopolies—is an essential part of patent jurisprudence. For instance, an effective bar against consumer challenges to patent invalidity,¹⁴³ the premise for which is the supposition that the patent holder's competitors are more effective patent validity contestants than other potential plaintiffs, requires that a party face the threat of an infringement suit in order to have standing. Obviously, only a competitor will generally face threats of such a

U.S. 661, 672 (1990); *Dawson Chem. Co. v. Rohm & Haas Co.*, 448 U.S. 176, 180 (1980); *Blonder-Tongue Labs., Inc. v. Univ. of Ill.*, 402 U.S. 313, 343 (1971); *Aro Mfg. Co. v. Convertible Top Replacement Co.*, 365 U.S. 336, 339 (1961); *Great Atl. & Pac. Tea Co. v. Supermarket Equip. Corp.*, 340 U.S. 147, 149 (1950). This “debate” seemingly has only one point: to sanitize the patent monopoly so that it more closely resembles simple property. A monopoly, of course, virtually compels the public interest. Thus, the trump of property depends on asserting not only that a patent is simple property, but also that it does not constitute an economic phenomenon, like a monopoly, in which the public has a particular interest. The introduction of the trump of property theory will routinely rely on cases of a different era. See, for instance, *Rose*, *supra* note 37, at 566 n.6 (citing *Cont’l Paper Bag Co. v. E. Paper Bag Co.*, 210 U.S. 405, 424 (1908)); Philip Konecny, *Windfall Property Rights for the Left Out Co-Inventor Who Gets Let into the Patent*, 16 *COMPUTER & HIGH TECH. L.J.* 141 (quoting the same language); Joan E. Schaffner, *Patent Preemption Unlocked*, 1995 *WIS. L. REV.* 1081, 1100 n.89 (1995) (citing *United States v. Am. Bell Tel. Co.*, 167 U.S. 224, 250 (1897) and *Consol. Fruit Jar Co. v. Wright*, 94 U.S. 92, 96 (1876)).

142. Many libertarians, practically wedded to the free market system, surprisingly oppose patent rights. One libertarian critique concludes,

We see, then, that a system of property rights in ‘ideal objects’ necessarily requires violation of other individual property rights, e.g., to use one’s own tangible property as one sees fit. Such a system . . . subverts the first-occupier rule. IP, at least in the form of patent and copyright, cannot be justified.

N. Stephan Kinsella, *Against Intellectual Property*, 15 *J. LIBERTARIAN STUDS.* 1, 44 (2001).

143. Basically, only two kinds of parties have standing to bring an infringement suit, or, conversely, an action for a declaratory judgment of invalidity: a patent proprietor (or one standing in her shoes) or a potential infringer. Thus, unless a proprietor, or a proprietor’s assignee, only parties facing threats of infringement lawsuits may bring claims themselves. *Fieldturf, Inc. v. Southwest Recreational Indus., Inc.*, 357 F.3d 1266, 1268 (Fed. Cir. 2004); *C.R. Bard, Inc. v. Schwartz*, 716 F.2d 874, 879 (Fed. Cir. 1983). Consumers or public interest organizations seeking to declare a patent invalid do not have that requisite standing. *Animal Legal Def. Fund v. Quigg*, 932 F.2d 920, 925, 938–39 (Fed. Cir. 1991). *But see* *People with Aids Health Group v. Burroughs Wellcome Co.*, No. 91-0574, 1992 U.S. Dist. LEXIS 578, at *7 (D.D.C. 1992) (leaving open the possibility of standing for patients who alleged a credible threat of infringement if they used AZT without authority of the patent holder). For more on this subject, see generally Roger D. Blair & Thomas F. Cotter, *The Elusive Logic of Standing Doctrine in Intellectual Property Law*, 74 *TUL. L. REV.* 1323 (2000) (providing a comprehensive overview of standing in IP cases—covering mandatory, optional, and forbidden parties).

suit, but competitors do not routinely challenge even questionable patents, because the market is not truly free and competitive. The patent system's reliance on the free market for policing may be misplaced. To the extent that a kind of "good old boys" network encourages patent holders to respect each other's turf, patent law suffers a fatal corruption.¹⁴⁴ Recent literature suggests that industrial collusion infects the entire patent regime.¹⁴⁵ Nevertheless, the law remains that consumers—those who actually pay the patent tribute—are ineligible to contest the validity of a patent grant.

When one considers the routine granting of patents in non-adversarial proceedings, the infrequent court challenges, and, since the advent of the Federal Circuit, the increased invulnerability of patents, patent law's characterization as a welcome shelter from unrestricted competition is not surprising.

It wasn't that nobody cared about their technology before the 1980s. . . . But a rapidly shifting business environment is forcing that notion to change. William Keefauver, an AT&T vice president and the company's top lawyer, cites three reasons: a significant gain in the competitiveness of foreign nations, coupled with an upsurge in counterfeiting; a higher proportion of a vendor's added value found in software; and a radical ruling in 1982 that created the CAFC—a body that has consistently upheld the value of patents.

Patents didn't count for much prior to that; as much as 70% of all patents were found to be invalid when tested in court, largely because the courts ruled in favor of dissemination of technology. "During the 1960s and 1970s, the concern was over monopolies. But that concern has largely disappeared," explains Oliver Smoot, executive vice president of the Computer and Business Equipment Manufacturers' Association.¹⁴⁶

The trump of property seems to require a determined ignorance of patent's policy role, because under its view of patents as property,¹⁴⁷ no legitimate point

144. When the giant chemical firm, Gema, refused to supply Zenith with raw materials to manufacture a drug that would have competed with Bristol-Meyers, an expert speculated that Gema did so because its parent, Sandoz, did not want to offend its competitor and opponent in a patent infringement suit, Bristol-Meyers. "Sandoz is a multibillion [dollar] drug company; somebody might have said, 'Are you one of us or one of them?'" Robin Goldwyn Blumenthal, *Zenith Labs Shares Tumble by Almost 40%*, WALL ST. J., Oct. 1, 1991, at B4.

145. John R. Thomas, *Collusion and Collective Action in the Patent System: A Proposal for Patent Bounties*, 2001 U. ILL. L. REV. 305 (proposing a solution to the pervasive collusion throughout the patent system).

146. Electronic Business Copyright (c) 1988 Information Access Company; Copyright (c) Cahners Publishing Co. 1988; August 15, 1988.

147. See generally John R. Thomas, *Liberty and Property in the Patent Law*, 39 HOUS. L. REV. 569, 569 (2002) ("Patents have seldom troubled civil libertarians. A specialized form of property, patents seemed pertinent to the technologies of traditional industry but little else."); Richard F. Cahaly,

exists at which to discuss policy. The argument over patents as property, thus, is clearly a diversion. The real question should be not whether patents are property, but, whatever their character, whether the public has the power and ability to exercise its own rightful interest in them. The trump of property, almost by definition, denies any interest outside that of the proprietor.¹⁴⁸ To call a patent a property right in order to obscure the economic and political nature of the patent regime is to use, as Justice Holmes said in a slightly different area of IP, “an unanalyzed expression of certain secondary consequences . . .”¹⁴⁹ Calling patents property, and thus denying the political nature of the role government plays in creating them or the public interest in policing them, fails to properly analyze the patent bargain. In that bargain, the patentee gives certain information to the public and receives temporary privileges in return. Nothing is inevitably or incurably wrong with calling the temporary privileges property, but the concept is certainly far removed from the general notion of property.¹⁵⁰ The double-barreled nature of the trump of property makes it effective and desirable to patent proprietors: the theory merits absolute rights to ownership, but any discussion of its role as a form of national industrial policy is simply off limits.

VI. THE PATENT SYSTEM AND ITS INTERNATIONAL IMPLICATIONS

The characterization of patents as a form of property—which is inconsistent with the preceding discussion of the process for granting patents—leads directly to international abuses. On the deployment of the trump of property, views of patent law once simply different become cases of piracy.¹⁵¹ The trump of property forbids

Comment, *At Each Other's Mercy: Do Courts Fairly Apply Rule 19 of the Federal Rules of Civil Procedure to Protect Patent Co-Owners' Property Rights?*, 35 SUFFOLK U. L. REV. 671, 685 (2001) (“Courts have stated that a patent constitutes property different from real or personal property, but, nonetheless, still forms an independent property interest.”). Professor Mark Lemley attributes a shift in the rhetoric of IP to “propertyization,” that compels the public to believe, for instance, that infringement is “‘theft,’ which it assuredly is not. . . .” Mark A. Lemly, Book Review, *Romantic Authorship and the Rhetoric of Property*, 75 TEX. L. REV. 873, 897 (1997).

148. The Patent Act does not speak of, or grant, a partial interest or right to the proprietor, but instead, recognizes an exclusive right. 35 U.S.C. § 154(a)(1) (2000). Moreover, the Act declares that “patents shall have the attributes of personal property,” a form of property in which the public traditionally has few, if any, legitimate rights. 35 U.S.C. § 261 (2000).

149. *E.I. du Pont de Nemours Powder Co. v. Masland*, 244 U.S. 100, 102 (1917). *Accord* *Franke v. Wiltschek*, 209 F.2d 493, 502 n.6 (2d Cir. 1953) (quoting *E.I. du Pont*, 244 U.S. at 102).

150. The “new property” owes its birth to Charles A. Reich, *The New Property*, 73 YALE L.J. 733 (1964), and its constitutional legitimacy to *Goldberg v. Kelly*, 397 U.S. 254, 261–63 (1970), which affirmed the notion that government benefits trigger due process requirements and therefore have some quality of property. Since that arrival, liberals have, probably justly, celebrated how the development has helped secure demands of the less fortunate against the government. The trump of property, however, surely turns all that on its head and seems like chickens coming home to roost with a vengeance.

151. For an insightful explanation of the so-called IP piracy, see Assafa Endeshaw, *The Paradox of Intellectual Property Lawmaking in the New Millennium: Universal Templates as Terms of Surrender for Non-Industrial Nations; Piracy as an Offshoot*, 10 CARDOZO J. INT’L & COMP. L. 47, 70–71 (2002), which states:

discussion that each nation, as a form of national industrial and competition policy, should have a strong interest and unarguable right to fashion its patent laws in any way it sees fit. If patents are simply a form of government regulation of competitive conditions¹⁵² or, more broadly, a form of national industrial policy, their wholesale export into other countries, especially less-developed ones, becomes highly contestable. Nations with different economic conditions need not and should not import and adopt the regulations that other countries impose, under the rubric of nonobviousness, on their own investments. In other words, given an understanding of the true nature of patent law—the test of nonobviousness or its international equivalent, the “inventive step,”¹⁵³ conscientiously or rationally demanding the imposition of First World patents upon Third World countries becomes very difficult.¹⁵⁴

This dilemma becomes a decisive matter in an age of rapid international expansion of IP rights. Domestic IP law is progressively extending across international boundaries.¹⁵⁵ The previously somewhat dry, abstract, and even “intellectual” subject of copyrights, patents, and trademarks has become a matter

Most often, piracy is perceived to be a manifestation of paltry IP protection or enforcement. Indeed, both are treated as being identical. Yet, while any nation's decision whether or not to introduce its own laws must be a measure of its sovereignty and its choice to adopt one specific form or another should be considered legitimate, this perspective is disavowed by the current, if not dominant, thinking among policy makers and academic lawyers in the U.S. and Europe. Typically, the characterization of non-enforcement as “piracy” overlooks the possibility, even reality, of the incongruity of IP to the degree of industrial development in the “pirate nations.”

152. “The operation of federal patent, copyright and trademark laws is assumed to advance the federal competitive mandate.” Goldstein, *supra* note 11, at 878. The second basic problem [“in the economics of the patent system”] relates to the overall allocation of productive resources in a developing economy, and to the question of whether at any one time the allocation to industrial research and development is deficient, excessive, or just right. STAFF OF SENATE COMM. ON THE JUDICIARY, *supra* note 129, at 445.

153. TRIPS, *supra* note 20, at 1208 n.27.

154. For more on this issue, see generally, Davis, *supra* note 6, at 830 (discussing whether IP would protect the cultural innovations of Third World countries).

155. Two notable recent additions to American domestic IP law illustrate well the attempt to expand the exercise of IP ownership overseas in ways previously thought to be illegitimate, that is, constrained by limitations of intraterritoriality. Congress has recently amended the patent law to allow the treatment of foreign products produced under processes protected by domestic patents as if produced domestically. Congress has taken this approach, because most countries consider acting as if domestic patent law has extraterritorial effect, the precise effect of this law, to be illegitimate. The second area is the growing reaction to the importation of “gray market” trademarked goods. Previously, the United States allowed importation of goods legally obtained abroad as long as proper marketing (meaning the affixation of any trademark) occurred in the country of origin. The current reaction excludes many of these goods and gives domestic trademarks an extraterritorial dimension they have historically never had. “As innovators create new technologies and problems for intellectual property law, domestic legal systems will have to respond with new forms of protection. With the increasing importance of the international marketplace, governments will need to extend this protection globally through one of the international intellectual property protection mechanisms.” Michael L. Doane, *TRIPS and International Intellectual Property Protection in an Age of Advancing Technology*, 9 AM. U. J. INT'L L. & POL'Y 465, 487–88 (1994).

of international concern and even of popular culture.¹⁵⁶ TRIPS¹⁵⁷ allowed this new kind of economic imperialism to gain legitimacy.¹⁵⁸

Internationally, patent law has developed into a means to exert raw power in a way frighteningly reminiscent of nineteenth century gunboat diplomacy. “Patents are important to ‘show the flag’—to show that you’re serious about protecting your technology,”¹⁵⁹ according to one industry report. “You have to build your arsenal with a portfolio of quality patents so that you put yourself in a position to have that ‘silver bullet’ to block a competitor. The more patents you have, the more likely it is that you’ll get that silver bullet . . .”¹⁶⁰ Unsurprisingly, the assertion of such raw power leads to abuse.¹⁶¹ But, abuse can only occur within the trump of property.

In the middle to late 1980s, patent holders engaged in a full-court press to expand their reach into previously unreachable places. Allegations of piracy and claims of patents as absolute property were recurrent themes. A “problem” suddenly arose of international patent “counterfeiting and piracy”¹⁶²—a problem

156. Patents, copyrights, and trademarks are no longer the reserve of specialists and are now truly topical to all. Too many possible issues are present to cite here in every area of the media. Perhaps one of the best known is the Napster case, *A & M Records, Inc. v. Napster, Inc.*, 239 F.3d 1004 (9th Cir. 2001). See Kelly Alexander, *The Day My Free Computer Music Died*, N.Y. TIMES, Feb. 18, 2001, § 9, at 6.

157. See *supra* note 155.

158. See Michael H. Davis & Dana Neacsu, *Legitimacy, Globally: The Incoherence of Free Trade Practice, Global Economics and Their Governing Principles of Political Economy*, 69 UMKC L. REV. 733 (2001).

159. John Kerr, *Loose Lips Sink Ships*, ELECTRONIC BUSINESS, Sept. 15, 1988.

160. *Id.* (quoting Steven Fox, head of the intellectual property section of technology giant Hewlett-Packard’s legal department). In *Mannington Mills, Inc. v. Congoleum Corp.*, 595 F.2d 1287, 1296 (3d Cir. 1979), the court ordered a balancing of the interests of the United States against those of each of twenty-six foreign countries to determine whether the foreign interest in providing patent protection to the defendant exceeded the domestic interest in permitting competitive trade in the patented product by non-patent holders. The court based its decision on considerations of “foreign policy, reciprocity, comity, and limitations of judicial power.” See also Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308 (1994) (addressing the problem that the issuance of a large number of questionable patents for software-related ideas may impede competitive development and follow-on innovation in the software industry).

161. “It is conceivable that the holder of a patent for one good might not want to sell that good if its sale could undercut the market position of [a] more profitable good that the firm sells.” Gacek, *supra* note 2. See also Jennifer J. Stearman, *Recent Development: DiscoVision Associates v. Disc Manufacturing, Inc.—Alleging Monopolization, Patent Tying, and Market Allocation in the Compact Disc Technology Market: Surviving a Motion to Dismiss*, 6 U. BALT. INTELL. PROP. J. 89 (1997) (discussing the allegations of abuse of the patent system, fraud, and misrepresentation in prosecuting and obtaining patents and engaging in coercive package licensing practices in *DiscoVision Assocs. v. Disc Mfg., Inc.*, Nos. 95-21-SLR, 95-345-SLR, 1997 U.S. Dist. LEXIS 7507 (D. Del. Apr. 3, 1997)); Oddi (Obviousness), *supra* note 23, at 1105–06 (noting that by “the end of the nineteenth century, significant anti-patent sentiment called for the non-adoption or abolishment of patent systems, because they were anti-competitive, extracted high social costs, and enhanced the abuses of monopoly power”).

162. Harvey J. Winter, *The Role of the United States Government in Improving International Intellectual Property Protection*, 2 J.L. & TECH. 325, 325 (1987). See also Trishka Waterbury, *Updates in Science & Technology Law—Biotechnology*, 1 B.U. J. SCI. & TECH. L. 9, 17–18 (1995), which recounts the following illustration of an international patent conflict:

constituting no more than the historically-accepted fact that not all countries had, nor should they have had under universally accepted principles of international law, the same patent regime as the United States. While some respected commentators remained skeptical that non-uniform patent policies injured United States trade,¹⁶³ others insisted that “inadequate patent protection . . . has a negative effect on U.S. trade.”¹⁶⁴ Because this situation could “no longer be tolerated,”¹⁶⁵ the United States government increasingly issued the “threat of sanctions”¹⁶⁶ against intransigent foreign governments. In fact, the very existence of a different foreign patent regime became a potentially “unfair trade practice” under United States law,¹⁶⁷ subjecting

Genentech has formally requested that U.S. Trade Representative Mickey Kantor threaten trade sanctions against Japan for inadequately protecting and enforcing U.S. biotechnology patents. Genentech’s President and CEO, Kirk Raab, said that one of the biggest problems American companies face upon entering the Japanese market is “the denial of meaningful patent protection,” along with “delays in obtaining approval of products and in securing issued patents.” Specifically, Raab charged that Japan’s patent policy allows Japanese biotechnology companies to compete in the market “without incurring the heavy R&D costs carried by U.S. firms.”

Id. at 16–17.

163. POSNER, *ECONOMICS AND THE LAW* (3d ed.).

164. Gerald J. Mossinghoff, *Research-Based Pharmaceutical Companies: The Need for Improved Patent Protection Worldwide*, 2 J.L. & TECH. 307, 308 (1987) (speaking as lobbyist for the American Pharmaceuticals industry). See also Michael P. Ryan, *The Function-Specific and Linkage-Bargain Diplomacy of International Intellectual Property Lawmaking*, 19 U. PA. J. INT’L ECON. L. 535 (1998), who provides as follows:

The Advisory Committee on Trade Policy Negotiation (“ACTPN”) provided the forum for U.S. intellectual property interests to advocate a “trade-related” strategy to reform the intellectual property policy milieu in which they were operating. The ACTPN, led by the chief executive officers of Pfizer and IBM, persuaded the U.S. Trade Representative (“USTR”) that the next round of multilateral trade negotiations should be used to adapt the international institutions of intellectual property to a world economy where developing countries were major producers of intellectual property goods. Patent protection should be harmonized at a high standard, and computer software, increasingly important to the U.S. economy, should be explicitly protected by the Berne Convention. Business interests and USTR articulated a “GATT strategy” to overcome developing-country opposition within WIPO to intellectual property institution change. GATT had a record of success regarding new rule creation in politically thorny trade policy matters, and it was its institutional design which offered the prospect of successfully reforming international intellectual property laws.

Id. at 559. Amy E. Carroll, Comment, *Not Always the Best Medicine: Biotechnology and the Global Impact of U.S. Patent Law*, 44 AM. U. L. REV. 2433, 2458 (1995) (“The United States and other developed countries claim that WIPO does not do enough to promote more stringent IP systems among its member states.”).

165. Mossinghoff, *supra* note 164, at 309.

166. *Id.* at 310.

167. The statute authorizes sanctions against “those foreign countries that . . . deny adequate and effective protection of intellectual property rights,” 19 U.S.C. § 2242(a)(1)(A) (2000), and further states that “[a] foreign country may be determined to deny adequate and effective protection of intellectual property rights, notwithstanding the fact that the foreign country may be in compliance with the specific obligations of the Agreement on Trade-Related Aspects of Intellectual Property Rights”

the foreign country to severe economic punishment unless it adopted laws of which this nation approved, regardless of full compliance with TRIPS.¹⁶⁸ In the 1980s, numerous countries started to surrender to these offensives. Both Mexico and Korea rewrote their IP laws at this country's demand.¹⁶⁹ Those changes occurred despite the fact that the governing international convention at that time,¹⁷⁰ in contrast to American complaints, restated the accepted international law principal to require only "equal treatment of nationals of all member countries in obtaining a patent in each member country."¹⁷¹ More than two dozen countries at that time refused to recognize patents for life-saving pharmaceuticals, a "problem" the Pharmaceutical Manufacturers Association had "targeted" for government resolution.¹⁷² A significant number of countries, including Portugal, Venezuela, Egypt, and India, rejected the notion that any one firm or individual should monopolize such chemicals, drugs, or foodstuffs, granted no such patent monopolies to its citizens, and refused to recognize the same in foreigners. Although these actions were in complete accord with the governing conventions and international law, the dominant expansion of IP under the multinational industrial view of patents as property, and the exclusion of debate over their true regulatory role, seem to have carried the day.

Parenthetically, whether the failure to protect such innovations, or more accurately, the demand that they are subject to free market forces, had any impact upon innovation or invention remains unanswered to this day.¹⁷³ A respectable

§ 2242(d)(4). See also the new legal developments regarding TRIPS under TRIPS-plus that favor the United States in its dealings with the developing countries.

Most provisions included in US bilateral treaties are TRIPS-equivalent, that is to say literally duplicated from the TRIPs Agreement. Others, such as the definition of the industrial application requirement, go beyond TRIPs provisions and can be described as TRIPS-plus. These are mostly copied from US law—or even on US Patent and Trademark Office policies not yet submitted to Congress—and exported to trading partners.

Jean-Frédéric Morin, *The Future of Patentability in International Law According to CAFTA*, BRIDGES, Mar. 2004, at 14, 16; see also Carlos María Correa, *Unfair Competition Under the TRIPS Agreement: Protection of Data Submitted for the Registration of Pharmaceuticals*, 3 CHI. J. INT'L L. 69, 85 (2002) ("From a public health perspective, the introduction of TRIPS-plus standards does not seem to be the best approach for developing countries."). For concrete examples of TRIPS-plus standards, see for example, Javier Gamboa, *TRIPS-Plus Standards in the Free Trade Agreement Signed Between Chile and the US*, 54 INTELL. PROP. FORUM 109, 109 (2003) (briefly noting the IP standards in the US TRIPS-plus agreement with Chile).

168. This law is still explicitly in effect. See *id.*

169. See Mossinghoff, *supra* note 164, at 310; Winter, *supra* note 162, at 331. See generally Oddi (IPS), *supra* note 23, at 845 nn.68–69, 874 n.191 (discussing Congressional action against countries with unapproved laws).

170. Paris Convention for the Protection of Industrial Property, Mar. 20, 1883, 13 U.S.T. 1, as revised at Stockholm, July 14, 1967, 21 U.S.T. 1629 [hereinafter Paris Convention].

171. Le-Nhung McLeland & J. Herbert O'Toole, *Patent Systems in Less Developed Countries: The Cases of India and the Andean Pact Countries*, 2 J.L. & TECH. 229, 230 (1987).

172. Mossinghoff, *supra* note 164, at 312, 323–24.

173. Alfred B. Engelberg, *Special Patent Provisions for Pharmaceuticals: Have They Outlived Their Usefulness?: A Political, Legislative and Legal History of U.S. Law and Observations for the Future*, 39 IDEA 389, 421 (1999). A very interesting situation is present in the domestic drug market.

body of research asserts that any relationship between patent protection and new products is a negative one.¹⁷⁴ Furthermore, such research indicates that the imposition of United States-style patent protection results in a loss of domestic research and development.¹⁷⁵ Extending patent protection to areas previously subject to market forces is probably not in the interests of most foreign countries (and perhaps even our own).¹⁷⁶ Consequently, although this country persists in extending patent protection as far as imaginable, many other countries extend protection only to the extent necessary to satisfy TRIPS or even more extraordinary United States demands.¹⁷⁷

The Drug Price Competition and Patent Term Restoration Act of 1984 . . . was an unprecedented attempt to achieve two seemingly contradictory objectives, namely, 1) to make lower-costing generic copies of approved drugs more widely available and 2) to assure that there were adequate incentives to invest in the development of new drugs.

. . . Specifically, it was proposed to create an exception to the Bolar infringement exemption in those instances where an applicant for an ANDA declared an intent to seek immediate FDA approval for marketing without regard to the expiration date of a patent.

. . . The generic drug manufacturers received several benefits as an inducement to accept these patent limitations, including assurances that 1) the ANDA giving rise to the patent challenge would be preserved for approval upon patent expiration even if the challenged patent was found to be valid and infringed and 2) no damages could be awarded for infringement unless there were commercial acts.

. . . Unlike the situation which prevailed prior to 1984, patents are now vigorously protected by the Court of Appeals for the Federal Circuit—a court which was new and had essentially no track record in 1984; the generic drug industry has become big business and has the financial ability to pay damages for wrongful infringement, and, most importantly, fourteen years of patent litigation experience has demonstrated that the generic side prevails far more often than the patent owner when patent rights are asserted.

Id. at 389, 402, 403, 423.

174. Pablo Challú, *The Consequences of Pharmaceutical Product Patenting*, WORLD COMPETITION, Dec. 1991, 65, 115. See also Mark Ritchie et al., *Intellectual Property Rights and Biodiversity: The Industrialization of Natural Resources and Traditional Knowledge*, 11 ST. JOHN'S J. LEGAL COMMENT. 431, 439 (1996) ("Imported patented products are generally more expensive and negatively impact the trade balance in a developing country.").

175. PABLO M. CHALLÚ, PATENT MONOPOLY IN ITALY: CONSEQUENCES.

176. See Boyle, *supra* note 44, at 1454 (addressing "the hypothesis that the number of inventions would increase along with the world-wide increase in patent systems," and concluding "that there is no significant relationship between these two variables, either in the United States or in the world at large"). See also Oddi (IPS), *supra* note 23, at 857 n.114 (discussing the United States' attempts to extend IP protection).

177. Milt Freudenheim, *Drugs Cost Less in Canada Than in U.S., Study Finds*, N.Y. TIMES, Oct. 22, 1992, at D-2 (reporting that a General Accounting Office study found average drug prices in Canada 32% less than in the United States). As a result, Canada was pressured to abandon its compulsory pharmaceutical patent laws. The battle then shifted to the Third World where this country continues to battle undeveloped countries over their efforts to make drugs affordable. Tina Rosenberg, *Look at*

The United States tried, but failed, to resolve this perceived problem by seeking to alter the Paris Convention¹⁷⁸ (the governing international patent treaty) to afford greater patent protection for international businesses. The subsequent attempt to accomplish the same result by altering GATT to include IP within the protections of non-discrimination that applied solely to tangible goods sold across international borders failed, for a substantial time, to gain international agreement.¹⁷⁹ In 1994, however, the Uruguay Round of GATT adopted TRIPS.¹⁸⁰ In the process, the developing countries may have sacrificed their interests to the profits of the First World, for TRIPS mandates substantially the same patent laws, with the kind of broad coverage theretofore found only in United States law, for all member countries.¹⁸¹

Until TRIPS, terms like “piracy” and “counterfeiting” had no legitimate application when a country refused to grant to foreigners or nationals the right to monopolize what it considered basic human necessities and rights. In fact, piracy and counterfeiting are appropriate terms only for the illegal practice of patents that the host country issued. In other words, the commission of piracy or counterfeiting is simply impossible where such an act does not violate a country’s domestic IP regime. To accuse a country of piracy or counterfeiting, absent a violation or even toleration of a violation of domestic laws applicable to foreigners and nationals alike, was to engage in diatribe, not dialogue. The World Trade Organization’s imposition of TRIPS upon all member countries now guarantees that these reluctant recipients will indeed be pirates if they become complicit in the violation of those laws, regardless of the coercion involved in their adoption.

In summary, the internationalization of patent law depends upon the trump of property, fundamentally grounded in the uninformed view that patents are the product of a determinate, impartial, corporal assessment of the technological state of a particular innovation. The trump of property ignores the truth that patent law, as discussed, imposes a political choice over preferred modes of investment. This decision to treat patent law and determinations of inventorship as objective and culturally independent is almost comic. Using the ordinary practitioner test with all its parallels to the “reasonable person” of negligence law is as unquestionably subjective in the sense of its uncertainty, indeterminacy, and contingency as is negligence law. For instance, a hypothetical decision about negligence in New York that allowing garbage to collect on the street for several days at a time is not unreasonable involves calculations of the burdens, costs, and risks culturally and economically specific to New York. Any attempt to transport that decision to Singapore, Algiers, London, or Zurich would be laughable. To the extent the

Brazil, THE NEW YORK TIMES MAGAZINE, Jan. 28, 2001, at 26. However, coming full circle since last year, Canada and its drug policy are again in the news. See, e.g., Monica Davey, *Illinois Seeks Permission to Buy Drugs in Canada*, N.Y. TIMES, Oct. 27, 2003, at A12 (Illinois Governor Rod Blagojevich sought to save the state “16 percent of its annual share of drug costs” for its employees).

178. Paris Convention, *supra* note 170.

179. See Sell, *supra* note 137.

180. TRIPS, *supra* note 153.

181. See Davis & Neacsu, *supra* note 158.

calculation of nonobviousness is, as the Supreme Court says, a reasonable person model, a similar attempt to transport a decision about invention from one culture or economic system to another is comical. One cannot insist that the same calculation constitutes invention across all boundaries any more than one can insist that what is negligence in one place is negligence in all.

This cultural-dependent nature of IP regimes is impossible to ignore. “[T]he level of protection accorded to intellectual property by any country represents a balance between a number of conflicting national considerations; thus, protection is a function of a country’s domestic situation and the various national policy objectives—social, developmental, and technological—that intellectual property laws are designed to serve.”¹⁸² To understand patent law, one must recognize that this initial balancing of considerations changes constantly and finds a disguise in the hidden interstices of the patent law. Yet, the apparently myopic position of the United States and other industrialized countries often seems to be that the former “pirate” nations were manipulating IP to further purportedly illegitimate social, economic, or technological agendas, while our laws did nothing more than recognize eminent and unassailable property rights.¹⁸³ Often ignored is the fact that this country’s IP law regime is as skewed as others—furthering our political goals, supporting our economic values, and protecting our most valued industries. Yet, under TRIPS, the United States gives precious little quarter to developing nations seeking equivalent advantages.¹⁸⁴

The application of patent law internationally has become just one more way the rich exploit the poor:

And yet when you consider how technologies exchange, when you examine the list of restricted conditions in those exchanges, it would be difficult to escape finding parallel to another era in human history—the era of feudalism, under which land was

182. David Hartridge & Arvind Subramanian, *Intellectual Property Rights: The Issues in GATT*, 22 VAND. J. TRANSNAT’L L. 893, 904 (1989).

183. One scholar observed:

Although many developing nations are among the worst pirates of patents and other forms of intellectual property, they would prosper from a strong regime protecting patents because these protections promote invention and industriousness and because they promote closer commercial ties with foreigners who will see their willingness to safeguard intellectual property as a sign of commercial sophistication and trustworthiness.

Gacek, *supra* note 2.

184. A notable recommendation suggests the following:

The GATT agreement should require a transition period of no more than two years for countries to adopt adequate patent laws Of course, the least developed countries should be allowed one or two years longer to adjust to the technical demands of enforcing patent protection, such as the establishment and maintenance of patent offices.

Id.

owned by a handful of landowners and was leased to sharecroppers and tenants-at-will¹⁸⁵

Unsurprisingly, the expansion of IP in the United States, in other advanced countries, and with TRIPS, internationally, has carried with it a distorted and wrong-headed view of the nature of IP. Viewing patents as the equivalent of tangible personal property, a belief that piracy can arise without illegality, reveals pure ignorance of the law of intangibles, an ignorance rare in other areas of the law. This shortcoming may exist because in no other area of law are the interested parties so uniformly and hegemonically aligned behind a single, though singularly inaccurate, misunderstanding.¹⁸⁶

Assertions of patent rights are not only claims of property ownership, but also domestic political judgments about the quality of life a society values and, in the case of a national industrial policy, the extent of investment. The United States' attempt to label foreign values different from its own as criminal piracy is troubling. A comparable situation would be Ohioans repulsed by champignons calling France a nation of poisoners.¹⁸⁷ GATT steered clear of any apparent problems while still limited to physical goods, the property ownership of which countries around the world universally recognize or at least avoid disputing. However, the application of GATT principles to IP converts a system of shared values to one in which some attempt to impose their particular domestic agendas upon others.

While the international trade controversy appears to involve both discreet concepts of extraterritoriality and amorphous ideas of economic justice, its significance increases substantially upon consideration of the decisive impact of some extraordinarily hidden and obscure issues of domestic American patent law. The cultural and political aspects of patent law are sometimes difficult to understand, especially to Americans, for whom claims of property are so redolently resonant. A comparative example illustrates the point. For most of this nation's history, American patent law did not extend to surgical procedures as such. While new drugs, tools, or equipment, even those used in surgery, could qualify for protection as inventions, a new surgical procedure itself, without more, could not. Recently, however, the Federal Circuit held that no such bar existed. In response,

185. Surendra J. Patel, *What the Group of 77 Wanted at UNCTAD and Why*, in *CURRENT INTERNATIONAL LEGAL ASPECTS OF LICENSING AND INTELLECTUAL PROPERTY* 124, 127 (Walter R. Brookhart et al. eds., 1980).

186. A partial explanation is that, at least until the last few years, no anti-patent bar has organized (such as one might find in products liability, for instance, where a substantial plaintiff's as well as defendant's bars are active; or even in criminal law, where the adversaries debate even the most fundamental assumptions of the system). Only the recent international expansion of IP into areas like computers and the internet caused organized resistance to develop. Until then, small and relatively powerless professional groups, like the librarians, have provided the only resistance to expanded IP rights.

187. Another example, as one writer observed, involved the Chinese, astonished to find Americans repelled by their regional canine cuisine, a cuisine unthreatened by Mad Cow Disease, asking, "But aren't you afraid to eat beef these days?" Craig S. Smith, *Local Treat Angers World Pet Lovers*, N.Y. TIMES, July 7, 2001, at A4.

Congress effectively reinstituted the bar to shield doctors and health-providing institutions from the threat of damages for surgical patents.¹⁸⁸

That medical procedures should not be one person's private property has a rather appalling historical antecedent. An infamous pair of sixteenth century physicians, the Chamberlain brothers, invented the obstetrical use of forceps, but insisted on using them only behind curtains. They profited immensely in their personal practice from the secret they thus maintained.¹⁸⁹ The deep feeling that this kind of mischief is unacceptable explains our historical aversion to health patents, despite the Federal Circuit's apparently contrary view.

Thus, one can consider our likely reaction to the Chinese or Canadians, for instance, finding their intellectual forte in procedures rather than drugs and deciding to extend their patent laws to purely surgical procedures. If such procedures became patented, under Chinese or Canadian domestic patent law to protect a new procedure whereby tissue from the muscle of the heel of the right foot replaces failing hearts, would the United States feel compelled to recognize the patent? If not, would citizens feel, every time such a transplant occurred, that they were pirating the property of Chinese or Canadian researchers? Perhaps a more topical inquiry would be whether to recognize other countries' claims to now patent human genomes that the PTO has apparently rejected as unpatentable. Would Americans admit, therefore, under German, French, or some other foreign law, to being pirates for insisting that human genes be public domain?

A decision to protect certain kinds of intangibles seemingly proceeds from political judgments about the good life. Thus, a decision to exclude some kinds of intangibles from protection is not simply a matter of piracy but, to the contrary, an affirmation that some knowledge belongs to all and, further, that allowing the exclusion of such knowledge from the public would be immoral. America takes that approach toward medical surgical procedures. Most of South America, and several Asian countries, feel similarly about drugs. What they see as a moral affirmation, the United States labels piracy.

The choices, however, are not solely cultural to the exclusion of economic. In truth, choices to patent things such as surgical procedures or business methods may vindicate cultural values, but they also constitute, far more importantly, economic

188. "With respect to a medical practitioner's performance of a medical activity that constitutes an infringement under section 271(a) or (b) of this title, the provisions of [other] sections . . . shall not apply against the medical practitioner or against a related health care entity with respect to such medical activity." 35 U.S.C. § 287(c)(1) (2000).

189. A recent account of the story provides as follows:

The Chamberlen brothers . . . traveled round England, charging enormous fees, always payable in advance, for attending births. The forceps were concealed in a richly carved locked casket. The brothers went to amazing lengths to prevent information about their instrument from leaking out. Contrary to the custom of the day, they excluded female family members from the delivery chamber; they blindfolded the laboring woman; and to confound the anxious relatives still further, they made all sorts of diversionary noises such as ringing loud bells, rattling chains, and banging with hammers during the delivery.

JESSICA MITFORD, *THE AMERICAN WAY OF BIRTH* 25 (1992).

decisions—whether investment in such an industry is worth the cost of private property characterization. The national industrial policy, which patent law represents, vindicates cultural values through that kind of economic calculus, thus incorporating both sets of values. As Paul Samuelson has said in a different context, “Profits are the lifeblood of the economic system, the magic elixir upon which progress and all good things depend ultimately. But one man’s lifeblood is another man’s cancer.”¹⁹⁰

VII. CONCLUSION

A full understanding of patent law reveals its essentially political nature. Calling patents ordinary property, and, more importantly, treating those rights as such seems slightly irrational. Does the characterization matter? Failure to understand that patent law plays an active role in fashioning a national industrial policy, or ignorance of the sheer presence of such a policy, leaves the country and its economy at the mercy of that policy. Internationally, the United States is likely to commit equal or worse damage. Surely, a country dedicated to universal values (not just the short term expedience of profit at any cost) has a defining interest in the welfare of others. This nation cannot be the new Barbarians of the twenty-first century, plundering the world for its own exclusive benefit. More particularly, America cannot afford to set the precedent that only self-interest matters. For when the wheel turns—and no one of any wisdom can doubt that it surely will turn—America will have no place to hide and no principle upon which to defend even its own interests when they are no longer paramount to those of others.

190. D.B. Tinnin, *Profits: How Much is Too Little?*, TIME, Aug. 16, 1976, at 54–55.