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3-1-2010

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Recommended Citation

Rochelle C. Dreyfuss, *The Federal Circuit as an Institution: What Ought We to Expect*, 43 Loy. L.A. L. Rev. 827 (2010). Available at: https://digitalcommons.lmu.edu/llr/vol43/iss3/20

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THE FEDERAL CIRCUIT AS AN INSTITUTION: WHAT OUGHT WE TO EXPECT?

Rochelle Cooper Dreyfuss*

Congress created the U.S. Court of Appeals for the Federal Circuit to alleviate the overcrowded dockets of the regional circuits and to send all patent appeals to one court. The court has achieved many of the goals for which it was created, but it may not be responding effectively to some fields' patent issues. Further, in the last decade the Supreme Court has reversed a very high percentage of the Federal Circuit's patent decisions. In their articles, Professors Cotropia and Wagner dispute some of the criticism that the Federal Circuit has attracted. Cotropia refutes the critics with empirical evidence of the rates of dissents and en banc decisions in the Federal Circuit. Wagner discusses the problems caused by the conflicting roles of the Federal Circuit (decider of cases versus manager of patent law adjudication). This Article posits that patent law must be reinterpreted given the massive changes technology has undergone in the last twenty-eight years. Although either Congress or the Supreme Court could take on a larger role with respect to patent law, this Article argues that the Federal Circuit should take on that role as it is best equipped to handle it.

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As both Professors Cotropia and Wagner note in their provocative articles, the Court of Appeals for the Federal Circuit was established to solve two problems in appellate litigation. First, the dockets of the regional circuits were overcrowded with cases, leading to extensive delays in the administration of justice. Second, patent law was in disarray: the different approaches taken by the appellate courts had led to rampant forum shopping and to fears that inventors would choose to keep their work secret rather than risk the vagaries of patent enforcement litigation.¹ Killing two birds with one stone, Congress created the Federal Circuit Court of Appeals and channeled to the new tribunal patent appeals from the district courts and from the U.S. Court of Customs and Patent Appeals (which had previously reviewed decisions in the U.S. Patent and Trademark Office (USPTO)).

The benefits of creating the Federal Circuit were clear. Removing technologically complex cases from the dockets of the regional circuits would free considerable amounts of time for other work.² Moreover, the alleged "notorious differences" between the law applied by the USPTO and the law applied by the courts,³ along with the diversity of views among the regional circuits, would be obliterated as a single court began to write law applicable throughout the nation. Forum shopping would disappear, and expert adjudication would produce doctrine resonant with the changing needs of the knowledge economy. With greater uniformity and predictability in the law, patents would become the premier vehicle for appropriating the fruits of technological innovation.⁴

^{1.} See, e.g., Industrial Innovation and Patent and Copyright Law Amendments: Hearings on H.R. 6033, H.R. 6934, H.R. 3806, and H.R. 2414 Before the Subcomm. on Courts, Civil Liberties, and the Admin. of Justice of the H. Comm. on the Judiciary, 96th Cong., 2d Sess. 574– 75 (1980) (statement of Sidney A. Diamond, Comm'r of Patents and Trademarks).

^{2.} Cf. Parke-Davis & Co. v. H.K. Mulford & Co., 189 F. 95, 115 (S.D.N.Y. 1911) (Learned Hand, J.) ("I cannot stop without calling attention to the extraordinary condition of the law which makes it possible for a man without any knowledge of even the rudiments of chemistry to pass upon such questions as these. The inordinate expense of time is the least of the resulting evils, for only a trained chemist is really capable of passing upon such facts"), aff'd in part and rev'd in part, 196 F. 496 (2d. Cir. 1912).

^{3.} Graham v. John Deere Co., 383 U.S. 1, 18 (1966) ("We have observed a notorious difference between the standards [of patentability] applied by the Patent Office and by the courts.").

^{4.} See generally Rochelle Cooper Dreyfuss, The Federal Circuit: A Case Study in Specialized Courts, 64 N.Y.U. L. REV. 1 (1989).

But there were risks associated with departing from the traditional—generalist—approach to federal adjudication. Most significantly, channeling cases to a single circuit violated the practice of allowing the common law to percolate. That practice began when the regional circuits were created and given judicial independence from one another.⁵ It is based on the notion that law evolves through interchange among the regional circuits and experimentation within their territories. Eventually, experience demonstrates which rules work best. At that point, either the regional courts reach consensus or the Supreme Court intervenes and settles the law throughout the nation. However, once adjudication is centralized in a single court, that form of evolution is no longer possible.

The Federal Circuit is now over a quarter-century old, and experience suggests that those who were optimistic about the court's creation and those who were pessimistic about the new approach were right. Forum shopping at the appellate level has ended; if there was a flight to trade secrecy, the explosion in patent applications indicates that the situation has been remedied.⁶ At the same time, however, many observers are highly critical of the doctrinal results the Federal Circuit has achieved.⁷ Some criticize the court's failure to respond effectively to the characteristics of individual fields;⁸ others claim that the application of law to fact remains indeterminate.⁹ The Supreme Court is evidently equally doubtful: in the last decade, it has granted certiorari in an unprecedented number of Federal Circuit

^{5.} See Circuit Courts of Appeals Act of 1891 (Evarts Act), ch. 517, 26 Stat. 826.

^{6.} See, e.g., Adam B. Jaffe & Josh Lerner, Innovation and Its Discontents: How Our Broken Patent System Is Endangering Innovation and Progress, and What to Do About It 11-13 (4th ed. 2004).

^{7.} See, e.g., id. at 11–16. See generally NAT'L RESEARCH COUNCIL OF THE NAT'L ACADS., A PATENT SYSTEM FOR THE 21ST CENTURY (Stephen A. Merrill et al. eds., 2004); NAT'L RESEARCH COUNCIL OF THE NAT'L ACADS., REAPING THE BENEFITS OF GENOMIC AND PROTEOMIC RESEARCH: INTELLECTUAL PROPERTY RIGHTS, INNOVATION, AND PUBLIC HEALTH (Stephen A. Merrill & Anne-Marie Mazza eds., 2006); U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION (2007), available at http://www.ftc.gov/reports/innovation/ P040101PromotingInnovationandCompetitionrpt0704.pdf.

^{8.} Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 BERKELEY TECH. L.J. 1155, 1157 (2002); Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1648–50 (2003).

^{9.} Kimberly A. Moore, Markman Eight Years Later: Is Claim Construction More Predictable?, 9 LEWIS & CLARK L. REV. 231, 245-47 (2005).

cases—and reversed or vacated almost every decision.¹⁰ At bottom, critics are concerned that the court's work product is suboptimal—that its isolation from other areas of the law, and from the wear and tear of debating issues with sister circuits, has stripped it of all incentive to write persuasive opinions or grapple with the broad policy issues a knowledge-based economy generates.¹¹

The articles that Cotropia and Wagner presented at this symposium paint a sunnier picture. In addition to accepting the view that the Federal Circuit has fulfilled optimists' hopes, these pieces dispute the criticism the court has attracted. They do so, however, in contrasting ways. Cotropia's approach is denial.¹² He offers two pieces of empirical evidence.¹³ The first is that the Federal Circuit has among the highest rates of dissent in the nation;¹⁴ the second is that it has the lowest rate of en banc decisions.¹⁵ He claims that the first finding demonstrates that isolation has not produced a "myopic view of patent law."¹⁶ To the contrary, the high dissent rate "push[es]

11. Rochelle Cooper Dreyfuss, In Search of Institutional Identity: The Federal Circuit Comes of Age, 23 BERKELEY TECH. L.J. 787, 809 (2008) [hereinafter Dreyfuss, Institutional Identity]; Rochelle Cooper Dreyfuss, The Federal Circuit: A Continuing Experiment in Specialization, 54 CASE W. RES. L. REV. 769, 779-80 (2004); Craig Allen Nard & John F. Duffy, Rethinking Patent Law's Uniformity Principle, 101 NW. U. L. REV. 1619, 1632-33 (2007); see John M. Golden, The Supreme Court as "Prime Percolator": A Prescription for Appellate Review of Questions in Patent Law, 56 UCLA L. REV. 657, 673 (2009).

12. Christopher A. Cotropia, Determining Uniformity Within the Federal Circuit by Measuring Dissent and En Banc Review, 43 LOY. L.A. L. REV. 801, 804 (2010).

^{10.} In a three-year period, the Supreme Court considered eight patent cases. Quanta Computer, Inc. v. LG Elecs., 128 S. Ct. 2109 (2008) (reversing Federal Circuit); KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398 (2007) (same); Microsoft Corp. v. AT&T Corp., 550 U.S. 437 (2007) (same); MedImmune, Inc. v. Genentech, Inc., 549 U.S. 118 (2007) (same); Lab. Corp. of Am. Holdings v. Metabolite Labs., Inc., 548 U.S. 124 (2006) (writ of certiorari dismissed as improvidently granted; dissent by Justice Breyer indicating he would have reversed); eBay, Inc. v. MercExchange, L.L.C., 547 U.S. 388 (2006) (vacating the Federal Circuit's decision); Ill. Tool Works, Inc. v. Indep. Ink, Inc., 547 U.S. 28 (2006) (same); Merck KGaA v. Integra Lifesciences I, Ltd., 545 U.S. 193 (2005) (same). Going back to 2002, two more Federal Circuit patent cases were vacated by the Supreme Court. Holmes Group, Inc. v. Vornado Air Circulation Sys., Inc., 535 U.S. 826 (2002); Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722 (2002). The Federal Circuit's outcome in In re Bilski, 545 F.3d 943 (Fed. Cir. 2008), was affirmed, Bilski v. Kappos, 130 S. Ct. 3218 (June 28, 2010), however the Federal Circuit's reasoning in that case was questioned and its reasoning in an earlier case, State Street Bank & Trust Co. v. Signature Financial Group, Inc., 149 F.3d 1368 (1998), was soundly rejected. The last time a Federal Circuit patent decision was fully affirmed was in 2001. See J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int'l, Inc., 534 U.S. 124 (2001).

^{13.} Id. at 815-17.

^{14.} Id. at 815, 818.

^{15.} Id. at 817, 822.

^{16.} Id. at 807.

against the conclusion that the Federal Circuit experiences groupthink, in which ideas become entrenched and the court acts as a cohesive unit. In comparison with other circuit court judges, Federal Circuit judges think more independently and are willing to express their distinct viewpoints through dissents."¹⁷

And even though the Federal Rules of Appellate Procedure contemplate that the courts of appeals will use en banc review to converge on a single rule,¹⁸ Cotropia suggests that the Federal Circuit is forging its disagreements into a coherent federal policy "in a relatively untransparent fashion"¹⁹—"under the table by slowly steering the law . . . to get in line with current thinking."²⁰

In contrast, Wagner's approach is apologetic: the Federal Circuit's rules may indeed be incoherent, but that is because there are actually two Federal Circuits, one charged with deciding cases; the other, with managing the adjudication of patent law.²¹ These roles can conflict. When they do, the court is required to sacrifice doctrinal purity to administrative imperatives—or vice versa. It is, in short, doing the best it can with a schizophrenic mandate.²²

I disagree with both positions: I am not convinced that the empirical data rule out concerns about quality, nor do I think these concerns are excused by the court's conflicting goals.

I. THE EMPIRICAL EVIDENCE

The emergence of empirical research in legal scholarship is a most welcome development, and Cotropia is to be congratulated for his role in bringing this methodology to the patent law literature. Empirical work is, however, a devilish enterprise in the legal sphere. There is little possibility of controlled experimentation, the relationship between the values being measured and the issues of interest can be murky, and the data must be interpreted with care.²³

^{17.} Id. at 821 (footnote omitted).

^{18.} Id. at 813 (quoting FED. R. APP. P. 35).

^{19.} Id. at 823.

^{20.} Id. at 823 n.124.

^{21.} R. Polk Wagner, The Two Federal Circuits, 43 LOY. L.A. L. REV. 785, 789 (2010).

^{22.} Cf. Elyn R. Saks with Stephen H. Behnke, Jekyll on Trial: Multiple Personality Disorder and Criminal Law (1997).

^{23.} There are also questions of methodology as well as the level of evidence needed to change a law that was itself adopted without a particle of empirical support. Both issues are well beyond the scope of this Commentary.

Accordingly, while Cotropia is to be applauded for his attempt to get a handle on the controversy surrounding the Federal Circuit's decision making, his conclusions are not persuasive.

First, there is a question as to whether raw comparisons of the dissent or en banc rates in various circuits tells us what we want to know. Each circuit has its own traditions and heritage.²⁴ And since different areas of the law develop in different ways, the dissent and en banc rates in any circuit can be as much a function of a tribunal's culture and the composition of its docket as it is a demonstration of a unique level of diversity in the viewpoints of its judges.

Second, to assess whether the debate among the judges of the Federal Circuit compensates for the absence of percolation among the circuits—that is, to measure the vitality and productivity of the debate—one needs to know more about the dissents and en bancs than their mere numbers. On what issues are the judges disagreeing (substance or procedure or application of law to fact)? How central to the overall operation and efficacy of the patent system are the issues that generate dissent? Do the disagreements mirror the substantive concerns expressed by the critics of the system? What is the degree of polarization (how far do the views of the dissenters differ from those of the majority)? How many issues trigger dissent? Are the judges repeatedly dissenting on the same issues or instead disagreeing on novel issues? What happens after an issue is en banced: do dissents on that topic then disappear?

Cotropia tells us little. At one point, he says that the en banc rate may be low because "there exist many disagreements among judges that never rise to the level of prompting en banc review for resolution."²⁵ That suggests that whatever diversity exists, it is not of a sort that puts important questions into play or is not significant enough to make much difference in outcomes. To the extent that critics are worried about stagnation on key matters, their concerns are not likely to be assuaged if dissents are so insubstantial. And as Cotropia notes, the number of dissents is inflated by the presence of

^{24.} See, e.g., GERALD GUNTHER, LEARNED HAND: THE MAN AND THE JUDGE 515–16 (1994) (noting that during Hand's day, en banc opinions were "scorn[ed]" in the Second Circuit as disruptive and wasteful).

^{25.} Cotropia, supra note 12, at 822.

one outlier judge.²⁶ Although I take his point that there are other steady dissenters, he does not tell us how the Federal Circuit would compare with the other circuits if the outlier dissents were removed. In fact, there may be less divergence in the judges' perspectives than the numbers initially suggest. At the end of the day, it is impossible to know from the data presented whether the judges are generating a healthy number of diverse approaches to important new questions in patent law or are simply being stubborn.²⁷

The third problem is interpretive. If Cotropia is right that there is significant debate within the Federal Circuit, the paucity of en banc review is quite troubling. The proffered explanation of sub-rosa agreement is not supported by data. That in itself is worrisome in a purportedly empirical article, and especially so because it seems possible to devise techniques for determining whether, in fact, the controversies among the judges resolve over time. To the extent that the judges are not, in fact, reaching consensus on open issues, the apparent improvements in patent litigation may be something of an illusion. While forum shopping may have ended (because there is no longer a choice of forums in which to litigate), the law could still be highly dependent on the panel hearing the case.

Finally, Cotropia understands the critique as a fear that the judges are engaged in groupthink, and he is right that his data on dissents demonstrates that the judges' views are not monolithic.²⁸ But there is a catch. Although the critics are worried about ossification,²⁹ the core criticism is about outcomes. It is not that the law is stagnating, but rather that it is *suboptimal*³⁰—that the "group" is not engaged in serious thinking at all, at least not about policy. Certainly, the data is amenable to that interpretation. Thus, while it is likely true that many courts ignore the rule requiring an en banc to change

^{26.} Id. at 820 (noting that Judge Newman had the highest number of dissents, with eighteen, while most other judges had between three and seven dissents).

^{27.} The cases on the written description requirement give us reason to think the latter. The role of this requirement has generated many dissents over the last few years; it remains to be seen whether the fractured opinion in Ariad Pharmaceuticals, Inc. v. Eli Lilly & Co., 598 F.3d 1336 (2010), will make a significant difference. See, e.g., Vanessa Lefort & Mary B. Boyle, Written Description and Enablement: The Pas de Deux Continues, in 1 PATENT LITIGATION 323, 325-27 (2009).

^{28.} Cotropia, supra note 12, at 810.

^{29.} See, e.g., Golden, supra note 11, at 701.

^{30.} See, e.g., id. at 703 ("[P]atent law may . . . become trapped in a suboptimal legal equilibrium.").

precedent, the large number of debates among the Federal Circuit judges, coupled with the low rate of en banc review, suggests that the judges are continually in conflict but fail to frame their disagreements in ways that make en banc review fruitful enough to identify optimal rules on which to converge.

What, after all, would count as a fruitful way to resolve judicial conflicts in the Federal Circuit? The standard percolation story assumes that observable differences in regional rules will help courts find the optimal outcome.³¹ But since disagreement among the judges of the Federal Circuit does not produce competing rules in different jurisdictions, that kind of experimentation is not possible. A second approach would be to debate policy—for each judge to articulate the rationale supporting his or her view of the issue under dispute.³² But while Federal Circuit judges routinely recite policy justifications for the statutory requirements of patent law, they rarely provide policy reasons for their own decisions. Thus, the court has adopted a rather formalistic approach to judging. In fact, some of its members have publicly suggested that it would be wrong to explain (or even to be motivated by) policy.³³ If that is the case, en bancs are, indeed, pointless—mere disputations rather than genuine argument.³⁴

^{31.} See id. at 701.

^{32.} Golden proposes another approach. He would have the Supreme Court act as "prime percolator" by intervening when consensus in the Federal Circuit began too soon or lasted too long. *Id.* at 662. This is not the place to comment on Golden's approach, except to say that hitting the "reset button" will not help unless the Federal Circuit is prepared to do what is suggested above: engage in genuine reexamination of underlying principles. Besides, as Mark Janis has noted, a "truly bad Federal Circuit decision is likely to spawn abundant litigation" all on its own. Mark D. Janis, *Patent Law in the Age of the Invisible Supreme Court*, 2001 U. ILL. L. REV. 387, 397.

^{33.} See, e.g., Alan D. Lourie, A View from the Court, 75 PAT. TRADEMARK & COPYRIGHT J. 22 (2007) ("[N]ot once have we had a discussion as to what direction the law should take... We have just applied precedent as best we could determine it to the cases that have come before us."); Paul Michel, Judicial Constellations: Guiding Principles as Navigational Aids, 54 CASE W. RES. L. REV. 757, 762–65 (2004).

^{34.} Cf. Monty Python, The Argument Clinic, http://www.youtube.com/ watch?v=teMlv3ripSM (last visited Apr. 5, 2010) (Michael Palin: "Argument is an intellectual process, contradiction is just an automatic gainsaying of anything the other person says." John Cleese: "No it isn't." Palin: "Yes it is." Cleese: "Not at all."). Admittedly, Federal Circuit disagreements are more than just contradiction. They tend, however, to feature disputes about which way precedent cuts rather than discussions about new circumstances or national innovation policy. See, for example, *In re Dillon*, 919 F.2d 688 (Fed. Cir. 1990), where despite policy arguments offered by the dissent, the majority made the disagreement about precedent, forcing the dissent to do the same. *Compare id.* at 696–98, *with id.* at 702–16 (Newman, J., dissenting).

Indeed, some of the cases the Federal Circuit takes en banc read in exactly this way. Consider, for example, *Phillips v. AWH Corp.*³⁵ That case, which concerned the proper methodology for construing claims, produced several opinions. Yet, despite the torrent of ink that has been spilled on theories of statutory construction and contract interpretation—not to mention a Supreme Court case on whether patents are closer to statutes or contracts³⁶—not one of the judges invoked those policy discussions. It is no surprise then, that the en banc resolved very little and, as Wagner notes, the debate on claim construction continues.³⁷

To put this another way, concerns with the Federal Circuit are not merely about the number of conflicting opinions, they are about the court's failure to engage in the judicial function of interpreting statutes, filling in statutory interstices with common law, and most important, agreeing to agree so that the end result is a "rule of law." Nothing in Cotropia's data indicates that the Federal Circuit is doing those things. In fact, his findings are equally (if not more) consistent with the view that each judge locks into a position from which he or she refuses to deviate.

II. THE "TWO FACES OF THE FEDERAL CIRCUIT" DEFENSE³⁸

I heartily agree with Wagner that the Federal Circuit is caught in a conflict between two roles. In an article published two years ago, I suggested that the effort to produce predictable law is in tension with the goal of generating law that accurately responds to national needs and policies.³⁹ Further, I noted that the distortion is particularly acute because the highly expert Federal Circuit is trying to make it easier for lay trial courts to apply technically complex patent law to technologically abstruse facts.⁴⁰ But the issue is one of degree. The critique of the Federal Circuit can be reframed as questioning the balance the court has struck among the demands of its various roles. When bright-line rules drive the standard of patentability so low that economists, the Federal Trade Commission, and the National

^{35. 415} F.3d 1303 (Fed. Cir. 2005).

^{36.} Markman v. Westview Instruments, Inc., 517 U.S. 370 (1996).

^{37.} Wagner, supra note 21, at 793.

^{38.} Cf. THE THREE FACES OF EVE (Twentieth Century-Fox Film Corp.) (1957).

^{39.} Dreyfuss, Institutional Identity, supra note 11, at 796-800.

^{40.} Id. at 802-04.

Academies become concerned about impenetrable patent thickets,⁴¹ it is time to reconsider the tradeoffs the court has made, even while acknowledging that it faces a difficult task.

Indeed, several of the recent Supreme Court reversals and remands can be understood in exactly this way. KSR International Co. v. Teleflex Inc.⁴² is a good example. The Federal Circuit had a bright-line rule, called the "TSM created test." on nonobviousness.⁴³ It required a challenger wishing to stitch together several pieces of prior art in order to demonstrate obviousness to show that the art included a teaching, suggestion, or motivation to combine.⁴⁴ That rule was easy for the lower courts to apply and produced predictable results.⁴⁵ Unfortunately, the predictable result usually pointed to patentability, and that drove the standard of inventiveness down. The Supreme Court reversed the decision not because it thought the TSM test had no place in the analysis---in fact, the Court retained the test-but rather because it thought the approach too rigid.46 In other words, the Court's view was that predictability and ease of application (in Wagner's words, "managerial considerations") had to give way to the Federal Circuit's lawmaking function.47

Significantly, the Supreme Court faces the same problem the Federal Circuit does: it must both enunciate federal law and manage adjudication. Yet there are few Supreme Court decisions that simplify substantive doctrine in order to make the job of the lower courts easier. Of course, the Supreme Court does not face the expertise asymmetry with which the Federal Circuit must contend. And there is enough disarray in other federal regimes to suggest that the Supreme Court might, at least on occasion, take a page out of the Federal Circuit's playbook and attend to the difficulties lower courts will face when applying its law. Nonetheless, the usual way in which the Supreme Court guides decision making is instructive: it explains

46. Id. at 418-19.

^{41.} See JAFFE & LERNER, supra note 6, at 13–17.

^{42. 550} U.S. 398 (2007).

^{43.} Id. at 406-07.

^{44.} Id.

^{45.} Id. at 416.

^{47.} See id. at 419–22; see also Bilski v. Kappos, 130 S. Ct. 3218 (June 28, 2010) (rejecting the adoption of the "machine-or-transformation" formulation as the sole test for determining whether a process is statutory subject matter).

to the lower courts the policies that it is trying to achieve. That form of "management" would serve the Federal Circuit well. More persuasive opinions that better articulate the reasons behind the approach the court chooses would lead to fewer reversals. These opinions would also help the bar's understanding of the law and thus might reduce the number of cases appealed.

Of course, the real question is whether any of this matters. After all, Congress's main objectives seem to have been achieved. The regional circuits are no longer swamped. The flight to trade secrecy has ended. There is no forum shopping at the appellate level, and even with the high dissent rate, the range of disagreement on patent law issues in the Federal Circuit is probably narrower than it was among the regional circuits.

It is not, however, clear that these were Congress's only goals. Prior to 1952, there were regular reenactments of patent legislation, and by historical standards, a new measure was overdue when the decision was made to create the Federal Circuit.⁴⁸ Thus, establishment of the Federal Circuit can be read as a substitute for a new act—as a decision to cede future elucidation of patent principles to a new entity.

Reinterpretation of patent law is clearly necessary, for much has changed since 1952 and even since the Federal Circuit was established. The U.S. economy is now based less on manufacturing and more on knowledge production.⁴⁹ The biotechnology industry exploded; nanotechnology was developed; computer science gave birth to an IT sector that spans a multiplicity of fields, from financial services to biological research. Patenting moved upstream, to cover advances that are fundamental to their fields: genes and proteins, diagnostics, and business methods. These patents are often qualitatively different from the patents that came before. They cover large swaths of innovative opportunities, and some cannot be easily

^{48.} See IP Mall, Franklin Pierce Law Ctr., Legislative IP Acts (LIPA)/History Archive: Patents, http://www.ipmall.info/hosted_resources/lipa/lipa_patent_index.asp (listing the Patent Acts of 1790, 1793, 1836, 1839, 1870, 1897, 1903, 1928, 1939, and 1952) (last visited Apr. 5, 2010).

^{49.} See generally WORLD TRADE ORG., WORLD TRADE REPORT 2008: TRADE IN A GLOBALIZING WORLD (2008), available at http://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report08_e.pdf.

invented around.⁵⁰ The business of patenting has also mutated. Universities, patent aggregators, and standard-setting organizations have entered the picture. In some industries, there is a high degree of specialization and therefore lengthy and complicated value-chain licensing.⁵¹

When it comes to adapting the basic doctrines of patent law to deal with these developments, the Federal Circuit's formalistic approach to adjudication creates something of a vacuum.⁵² Congress usually deals with technologically complex subject matter by delegating authority to administrative agencies;⁵³ one can only speculate as to why Congress did not hand patent law over to the USPTO. Perhaps the problem was that the USPTO was established before agencies were given rule-making authority,⁵⁴ perhaps Congress thought the USPTO lacked expertise in relevant areas (such as economics);⁵⁵ perhaps the USPTO's close relationships with technology producers, coupled with the absence of contact with technology consumers, made it appear particularly susceptible to capture.⁵⁶ Whatever the reason, the USPTO has only recently begun to tiptoe into policy making.⁵⁷ Unless (or until) it obtains more authority, it is not an institution capable of keeping the patent regime current with changing needs.

^{50.} SEC'Y'S ADVISORY COMM. ON GENETICS, HEALTH, AND SOC'Y (SACGHS), REVISED DRAFT REPORT ON GENE PATENTS AND LICENSING PRACTICES AND THEIR IMPACT ON PATIENT ACCESS TO GENETIC TESTS 44–50 (SACGHS, Approved Paper, 2010) *available at* http://oba.od.nih.gov/oba/SACGHS/SACGHS%20Patents%20Report%20Approved%202-5-20010.pdf.

^{51.} See generally Graeme B. Dinwoodie & Rochelle C. Dreyfuss, Diversifying Without Discriminating: Complying with the Mandates of the TRIPS Agreement, 13 MICH. TELECOMM. & TECH. L. REV. 445 (2007).

^{52.} See Diamond v. Chakrabarty, 447 U.S. 303 (1980) (biotechnology); O'Reilly v. Morse, 56 U.S. 62 (1854) (use of electrical current); see also Ass'n for Molecular Pathology v. U.S. Patent & Trademark Office, 669 F. Supp.2d 365, 365 (S.D.N.Y. 2009) (challenging the patentability of genetic information under the Patent Act and on First Amendment grounds).

^{53.} See Ass'n for Molecular Pathology, 669 F. Supp.2d at 383-85.

^{54.} See Dickinson v. Zurko, 527 U.S. 150, 154 (1999).

^{55.} See, e.g., Stuart Minor Benjamin & Arti K. Rai, Who's Afraid of the APA? What the Patent System Can Learn from Administrative Law, 95 GEO. L.J. 269, 277-79, 290-92 (2007); Arti K. Rai, Allocating Power over Fact-Finding in the Patent System, 19 BERKELEY TECH. L.J. 907, 918-19 (2004); Arti K. Rai, Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform, 103 COLUM. L. REV. 1035, 1132-33 (2003).

^{56.} Clarisa Long, The PTO and the Market for Influence in Patent Law, 157 U. PA. L. REV. 1965, 1992–96 (2009).

^{57.} Id. at 1972.

Arguably, the Supreme Court could serve instead.58 As John Duffy has demonstrated, it is certainly possible for the Court, through careful intervention, to maintain close control over patent jurisprudence.⁵⁹ And, indeed, because the Court sees the full range of federal issues, it is in the best position to decide overarching policy questions, such as determining the relationship between patent law and antitrust law,⁶⁰ identifying the areas where patent law is the right instrument for motivating investment in innovation,⁶¹ or determining the right balance between ease and accuracy in decision making.⁶² The Court is, however, too busy to intervene on a regular basis.⁶³ Furthermore, the Justices have little experience in patent law (indeed, because of the transfer of patent cases to the Federal Circuit, Justice Stevens was the last Justice to have heard patent appeals as a circuit court judge). In contrast, several Federal Circuit judges had developed considerable expertise before ascending the bench;⁶⁴ presumably, the rest are quickly educated through repeated exposure to patent litigation. The richness of the court's docket gives its members ample opportunity to learn about emerging sciences, to consider all of the problems that arise as new technologies interface with patent law, and to intervene effectively. As between the Supreme Court and the Federal Circuit, the latter is therefore the right institution to establish midrange policy-to hone the standard of inventiveness, to determine the appropriate reach of the patentee's right, and to decide on the contours of the defenses to infringement.

^{58.} See, e.g., Janis, supra note 32, at 410.

^{59.} John F. Duffy, The Festo Decision and the Return of the Supreme Court to the Bar of Patents, 2002 SUP. CT. REV. 273, 333 (2002).

^{60.} See, e.g., 111. Tool Works, Inc. v. Indep. Ink, Inc., 547 U.S. 28, 37-43 (2006).

^{61.} See generally In re Bilski, 545 F.3d 943 (Fed. Cir. 2008), aff^{*}d, Bilski v. Kappos, 130 S. Ct. 3218 (June 28, 2010).

^{62.} In addition to KSR, discussed above, see Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 733-41 (2002). The Supreme Court also has an important administrative role in allocating judicial power; see, for example, Holmes Group, Inc. v. Vornado Air Circulation Systems, Inc., 535 U.S. 826 (2002); Janis, supra note 32, at 408-16.

^{63.} For example, when KSR was decided in 2007, the Supreme Court had not addressed nonobviousness since 1976. See KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 417 (2007). Until Laboratory Corp. of America Holdings v. Metabolite Laboratories, Inc., 548 U.S. 124 (2006), the last case on manipulating information was in 1981. See id. at 126. Before Microsoft Corp. v. AT&T Corp., 550 U.S. 437 (2007), there were no Supreme Court cases on electronic and global distribution of patented materials. See id. at 442, 457–58. Until Quanta Computer, Inc. v. LG Electronics, Inc., 553 U.S. 617 (2008), there was no opinion on modern value-chain licensing. See id. at 619.

^{64.} Golden, supra note 11, at 668 n.49.

Admittedly, Congress could instead reassert its authority and enact law that addresses these changes. However, recent experience with patent reform shows the wisdom of the initial decision to leave these issues to the Federal Circuit. Reform has been in the works for half a decade and has gone nowhere, as increasingly deep divisions among the patent industries lead to legislative stalemate.⁶⁵ In this environment, perseverated disagreements among the judges of the Federal Circuit without meaningful opportunities (or willingness) to agree—or decisions that put managerial concerns over the obligation to engage in lawmaking—do not serve the country well. And that is true even if all of the goals Congress had in 1982 were met.

Indeed, Cotropia's data could be used to tell an even more troubling story. One thing the Federal Circuit has learned to do is to write dissents that attract Supreme Court review.⁶⁶ Thus, even if the court rejects the notion of playing a dispositive policy role in patent adjudication, it could be spurring the Supreme Court to act—that is, it could be teeing up the issues so that the Supreme Court can easily grasp them. But the low en banc rate suggests that the Federal Circuit is unwilling to do that either—indeed, the rate may be low because the court is actively avoiding review.⁶⁷

Nor does the Federal Circuit engage with the Supreme Court in other ways. Take the issue of patentable subject matter. In a dissent from the dismissal of certiorari in *Laboratory Corp. of America v. Metabolite Laboratories, Inc.*, Justice Breyer expressed skepticism

^{65.} Reform bills include the Patent Reform Act of 2005, H.R. 2795, 109th Cong. (2005); the Patents Depend on Quality Act of 2006, H.R. 5096, 109th Cong. (2006); and H.R. 5418, 109th Cong. (2006). The 2007 proposals of the 110th Congress include S. 1145, S. 3923, and H.R. 1908. Most recently, Congress is considering the Act of 2009, H.R. 1260, 111th Cong. (2009) and Patent Reform Act of 2009, S. 515, 111th Cong. (2009). In 2005, the House considered in committee two other proposals, which were never introduced as amendments or bills. Amendment in the Nature of a Substitute to H.R. 2795, Offered by Rep. Smith of Texas (July 26, 2005), *available at* http://www.aipla.org/Content/ContentGroups/Legislative_Action/109th_Congress/House1/chairsub-smittx_022_xml.PDF; A Coalition for 21st Century Patent Law Reform: Balanced Initiatives to Advance Quality and Provide Litigation Reforms (Sept. 1, 2005), *available at* http://www.fr.com/news/2005-09-14_Coalition_Draft.pdf.

^{66.} Examples of strong dissents followed by Supreme Court grants of certiorari include *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 234 F.3d 558, 619–42 (Fed. Cir. 2000) (various dissents); *Integra Lifesciences I, Ltd. v. Merck KGaA*, 331 F.3d 860, 872–78 (Fed. Cir. 2003) (Newman, J., dissenting in part), and *Bilski*, 545 F.3d 943, 966–1016 (Fed. Cir. 2009), which featured a concurrence by Judge Dyk (joined by Judge Linn) and dissenting opinions by Judges Newman, Mayer, and Rader.

^{67.} Cf. Richard L. Revesz, Environmental Regulation, Ideology, and the D.C. Circuit, 83 VA. L. REV. 1717, 1736 (1997) (suggesting that judges vote strategically to avoid review).

about the Federal Circuit's extensions of patent law: "sometimes," the Justice wrote, "too much patent protection can impede rather than 'promote the Progress of Science and the useful Arts ""68 In subsequent cases on the scope of statutory subject matter, the Federal Circuit could have elucidated the considerations that should underlie the decision to protect new technological areas, something it failed to do when it decided State Street Bank & Trust Co. v. Signature Financial Group, Inc.,69 in which it did little more than quote 35 U.S.C. § 101.70 Instead, however, in a footnote in Prometheus Laboratories. Inc. v. Mayo Collaborative Services,⁷¹ a case raising issues closely connected to the issues in Metabolite, the court essentially ignored Metabolite.⁷² To be sure, the court acknowledged the case, but it did so in a footnote, stating that "dissent is not controlling law" and that the claims in the two cases were "different"-with no policy-based explanation of how they were different enough to mandate different results.73

Management concerns cannot explain the failure to engage at this level. And this failure to engage in a genuinely meaningful way makes the high number of dissents irrelevant and the low number of en banc reviews even more troubling. High technology is the nation's future. The nation deserves more from the Federal Circuit.

^{68. 548} U.S. 124, 126 (2006) (quoting U.S. CONST. art. I, §8, cl. 8).

^{69. 149} F.3d 1368 (Fed. Cir. 1998).

^{70.} Id. at 1372-73.

^{71. 581} F.3d 1336 (Fed. Cir. 2009).

^{72.} Id. at 1346 n.3.

^{73.} Id. The petition for certiorari in *Prometheus* has now been granted and the decision vacated and remanded in light of *Bilski*, 130 S. Ct. 3218 (June 28, 2010). It remains to be seen how the court engages with the decision in *Bilski*.