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Through the Alice Corp. Looking Glass: Using Pragmatic Arguments to Bring Predictability to Patent Law

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Through the *Alice Corp.* Looking Glass: Using Pragmatic Arguments to Bring Predictability to Patent Law

By Jason B. Portis*

ABSTRACT

Within the last four years, multiple institutional actors that have largely remained dormant in the scope of innovation policy and patents have undertaken a surprisingly interventionist reform of patent law. Congress, administrative agencies, and the Supreme Court have all recently shaped patent law to be more pragmatic and less overtly formalistic. Conversely, the Court of Appeals for the Federal Circuit has staunchly defended a formalist approach to patent law, advocating consistently for bright-line rules.

The Federal Circuit has been charged with bringing predictability to patent law since its creation in 1982. The Federal Circuit attempts to bring predictability and uniformity through a largely rule-based formalist approach. Empirical evidence shows that the Federal Circuit's rule formalism has actually decreased the predictability of patent law. The Supreme Court's recent interventions into patent law show they are in favor of a more pragmatic approach, favoring policy considerations over the adoption of bright-line formalist rules.

The history of the Federal Circuit shows it was designed to be an institutional body of expertise in patent law. This expertise was meant to serve two purposes, the first was to bring predictability and uniformity to patent law. The second was to be a body with not only the power to shape patent law, but the knowledge to shape it in accordance with the goals and policies inherent in the Patent Act. This comment explains how recent Supreme Court precedents regarding patent-eligible subject matter create a framework for inculcating pragmatic, policy intensive arguments into traditionally rigid, formalistic Federal Circuit jurisprudence. The framework becomes a vehicle for the Federal Circuit to shape patent law in alignment with the pragmatic and social considerations derived from innovation policy. This comment then illustrates how that framework can be applied to bring predictability to other key areas of uncertainty in patent law.

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INTRODUCTION

¶1 The Court of Appeals for the Federal Circuit ("CAFC") has been the subject of scrutiny since its inception in 1982. Whether commentators are troubled regarding fears of specialized judiciary¹, the court's confusing jurisprudence², or the unique and anomalous nature of patent law itself³, the Federal Circuit⁴ is frequently a source of discussion and debate. One of the points of contention for which the Federal Circuit is often criticized is their reliance on a formalistic approach in deciding issues of patent law.⁵ Many patent law scholars have advanced their own views on the causes and rationales behind this rule based approach, including its function in teaching trial court judges as well as its role in bringing uniformity to patent law.⁶ This comment does not seek to explain the formalist behavior, rather only to view it as evidence of the lack of policy considerations in Federal Circuit jurisprudence.⁷

¶2 At a time when patent law is coming to the foreground, not just in the legal world, but among the public at large⁸, the specific values and merits on both sides of the patent system should be evaluated and re-examined. Within the last four years, multiple institutional actors that have largely remained dormant in the scope of innovation policy, such as the U.S. Patent and Trademark Office ("PTO"), Congress, and the Supreme Court, have undertaken a surprisingly interventionist policy-based patent law reform.⁹ These

¹ See, e.g., Rochelle C. Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1 (1989); Paul R. Gugliuzza, *Rethinking Federal Circuit Jurisdiction*, 100 GEO. L.J. 1437 (2012); Craig Allen Nard & John F. Duffy, *Rethinking Patent Law's Uniformity Principle*, 101 NW. U. L. REV. 1619 (2007); Judge Diane P. Wood, *Keynote Address: Is it Time to Abolish the Federal Circuit's Exclusive Jurisdiction in Patent Cases?*, 13 CHI.-KENT J. INTELL. PROP. 2 (2007).

² See, e.g., Paul D. Carrington & Paulina Orchard, *The Federal Circuit: A Model for Reform?*, 78 GEO. WASH. L. REV. 575 (2010); Rochelle C. Dreyfuss, *In Search of Institutional Identity: The Federal Circuit Comes of Age*, 23 BERKELEY TECH. L.J. 787 (2008); Arti K. Rai, *Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform*, 103 COLUM. L. REV. 1035 (2003).

³ See, e.g., Kimberly A. Moore, *Are District Court Judges Equipped to Resolve Patent Cases?*, 15 HARV. J.L. & TECH. 1 (2001); Robert Pitofsky, *Challenges of the New Economy: Issues at the Intersection of Antitrust and Intellectual Property*, 68 ANTITRUST L.J. 913, 921-23 (2001); Arti Rai, *Addressing the Patent Gold Rush: The Role of Deference to PTO Patent Denials*, 2 WASH. U.J.L. & POL'Y 199 (2000).

⁴ The terms "Federal Circuit" and "CAFC" are often interchangeable. In this comment, "Federal Circuit" will refer to the court as an institutional structure, while "CAFC" will refer to the court as an actor in the jurisprudence of patent law.

⁵ See, e.g., Peter Lee, *Patent Law and the Two Cultures*, 120 YALE L.J. 2 (2010); John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U. L. REV. 771 (2003); Carl Tobias, *The White Commission and the Federal Circuit*, 10 CORNELL J.L. & PUB. POL'Y 45, 58 (2000).

⁶ See, e.g., Laura G. Pedraza-Fariña, *The Federal Circuit: An Expert Community Approach*, 30 BERKELEY TECH. L.J. 89 (2015); Arti K. Rai, *Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform*, 103 COLUM. L. REV. 1035 (2003); John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U. L. REV. 771 (2003).

⁷ See *infra* Part II.

⁸ See, e.g., Editorial, *Clarifying, and Tightening, Patent Law*, N.Y. TIMES, June 4, 2014, <http://www.nytimes.com/2014/06/05/opinion/clarifying-and-tightening-patent-law.html> [<http://perma.cc/C4AF-A4SR>]; Adam Liptak, *Two Rulings May Curb Lawsuits Over Patents*, N.Y. TIMES, Apr. 29, 2014, <http://www.nytimes.com/2014/04/30/business/two-rulings-may-curb-lawsuits-over-patents.html> [<https://perma.cc/8CHX-RMDL>]; Adam Liptak, *Justices, 9-0, Bar Patenting Human Genes*, N.Y. TIMES, June 13, 2013, <http://www.nytimes.com/2013/06/14/us/supreme-court-rules-human-genes-may-not-be-patented.html> [<http://perma.cc/GYP9-BW54>]; Charles Duhigg & Steve Lohr, *The Patent, Used as a Sword*, N.Y. TIMES, Oct. 7, 2012, <http://www.nytimes.com/2012/10/08/technology/patent-wars-among-tech-giants-can-stifle-competition.html> [<http://perma.cc/CF3M-7U53>].

⁹ See, e.g., Sarah Tran, *Policy Tailors and the Patent Office*, 46 U.C. DAVIS L. REV. 487, 508-17

entities have viewed patent law as a holistic endeavor, considering factors such as: maximizing economic efficiency, promoting follow-on innovation, and developing and protecting the public storehouse of knowledge.¹⁰ The Federal Circuit believes its formal rule based jurisprudence brings uniformity and predictability to patent law, indeed some commentators have supported this contention.¹¹ However, empirical evidence suggests that formalism actually decreases precision; and that a more pragmatic approach would better serve the goals of the CAFC.¹² This is not a comment that tells the Federal Circuit what patent law should be. This is an analysis of the types of arguments used, which types of arguments best achieve the goals of the specialized patent appeals court, and how to implement the best arguments across the different doctrines of patent law.

Part I of this comment accomplishes two main points. First, it establishes that rule-based formalism is antithetical to adjudication that considers policy implications. Second, it describes why precision is favorable and the empirical evidence that supports a pragmatic approach to achieve precision over a rule-based formalistic approach. Part II walks through the recent intervention of the Supreme Court into the area of patent-eligible subject matter. This recent case law illustrates why a staunch entrenching against a policy inculcated approach is countercurrent with the goals opined by rule formalism. Part III builds off the example drawn in Part II to show how policy arguments can be integrated into other areas of unpredictability in patent law to increase precision.

I. FORMALISM AND THE CAFC

The formalist, rule-based approach to patent law adjudication has led to increased unpredictability in patent law. By inculcating policy arguments into patent law, greater precision can be achieved.

A. Background & Formation of the CAFC

The Evarts Act, also known as the Judiciary Act of 1891, created the Courts of Appeals as we know them today.¹³ It reassigned the jurisdiction of routine appeals to regional circuit courts.¹⁴ During the congressional debates over the exact structure the new appeals system, there was a discussion of creating a specialized patent court.¹⁵ The benefit would be a specialized court that would hear more patent law cases, and thus be in a better position to render opinions that would promote innovation and societal progress.¹⁶ This proposal was tabled for lack of support in Congress; there were too many questions over

(2012)(Discussing the prioritization procedure of the PTO and its role in determining which technologies have greater national importance.); Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (Largely shifting the United States from a first-to-invent-system to a first-to-file system, increasing incentive to disclose innovations to the public.); *Mayo Collaborative Servs., v. Prometheus Labs., Inc.*, 132 S.Ct. 1289 (2012)(discussed *infra* Part II) (respectively).

¹⁰ Discussed *infra* Part II.

¹¹ See, e.g., Dreyfuss, *supra* note 1, at 8–14; Gugliuzza, *supra* note 1, at 1457-59.

¹² Discussed *infra* Part I.

¹³ Judiciary Act of 1891, 26 Stat. 826 (1891).

¹⁴ See Judiciary Act of 1891, 26 Stat. 826 (1891).

¹⁵ See STAFF OF SUBCOMM. ON PATENTS, TRADEMARKS, AND COPYRIGHTS, SENATE COMM. ON THE JUDICIARY, 85TH CONG., SINGLE COURT OF APPEALS—A LEGISLATIVE HISTORY 1 (Comm. Print 1959).

¹⁶ See *id.*

how its appellate role would co-exist with the Supreme Court as required by Article III of the Constitution.¹⁷ It was decided that discretionary review by the Supreme Court of final patent decisions in the regional circuits would be sufficient to bring uniformity to patent law.¹⁸

¶6 Eventually, 91 years later, this specialized patent appeals court was created with the Federal Courts Improvement Act of 1982 (FCIA).¹⁹ The problems inherent with patent law had persisted for so many years, the need outweighed the concerns.²⁰ To solve the previous concerns of those debating the Evarts Act, it was insured that the Supreme Court would still be able to exert discretionary review over the newly christened Federal Circuit.²¹ Additionally, the Federal Circuit had to take on additional responsibilities as part of the compromise for its creation.²² Regardless, the two main goals of the Federal Circuit were clear: (1) to provide uniformity and predictability to patent law and (2) to be a body with the necessary expertise to resolve patent disputes concurrently with the designs and intentions of the Patent Act.²³ The question remains of how the Federal Circuit should promulgate patent law arguments as to best achieve these goals.

B. Definitions for Formalism

¶7 Formalism, as used here, describes rule-based adjudication without consideration of any other factors. Expressed another way, it is the “adherence to a norm’s prescription without regard to the background reasons the norm is meant to serve.”²⁴ A logician who follows formalism will act on the end result of the prescription of an algorithm without regard to the purpose of the rule itself.²⁵ It is the purest example of form-over-function.

¶8 Legal scholars have noted that accurate decision making rarely involves pure formalism.²⁶ Laws are rules that exist as derivatives of Congressional will, and they should

¹⁷ See *id.*; U.S. CONST. art. III, § 1, cl. 1.

¹⁸ See STAFF OF SUBCOMM. ON PATENTS, TRADEMARKS, AND COPYRIGHTS, SENATE COMM. ON THE JUDICIARY, 85TH CONG., SINGLE COURT OF APPEALS—A LEGISLATIVE HISTORY I (Comm. Print 1959)

¹⁹ Federal Courts Improvement Act of 1982, 96 Stat. 25 (1982).

²⁰ Justice Frankfurter cited the lack of public interest as the main reason for the lack of earlier legislation to create a specialized patent court. “The layman knows little and cares less about patent controversies.” Felix Frankfurter & James M. Landis, *THE BUSINESS OF THE SUPREME COURT* 175 (1927). Still, other notable judges had called for a specialized patent court decades earlier. Judge Learned Hand is famous for his patent law jurisprudence prior to the creation of a specialized court. He remarked, “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 questions such as these. The inordinate expense of time is the least of the resulting evils.” *Parke-Davis & Co. v. H.K. Mulford Co.*, 189 F. 95 (1911). The Chief Judge for the Court of Customs and Patent Appeals, William J. Graham, echoed this sentiment, “While these patent[] cases are of vast importance to the industrial life of the country. . . [s]ome of them cry to the very heavens with their aridity.” William J. Graham, *The Court of Customs and Patent Appeals, Its History, Functions, and Jurisdiction*, FED. BAR ASS’N J., Oct. 1932 at 33,37.

²¹ See 28 U.S.C. §1254(1) (2006).

²² See *id.* §1295(a).

²³ See, e.g., *Hearing on S. 21 and S.537 Before the Subcomm. on Courts of the S. Comm. on the Judiciary*, 97th Cong. 211; Jack Q. Lever Jr., *The New Court of Appeals for the Federal Circuit*, 64 J. PAT. OFF. SOC’Y 178 (1982); Daniel J. Meador, *Origin of the Federal Circuit: A Personal Account*, 41 AM. U. L. REV. 581 (1992).

²⁴ See Larry Alexander, *With me, It’s All ‘er Nuthin’: Formalism in Law and Morality*, 66 U. CHI. L. REV. 530, 531 (1999).

²⁵ See *id.*

²⁶ See, e.g., Cass R. Sunstein, *Law and Administration After Chevron*, 90 COLUM. L. REV. 2071, 2086-

be applied in a way that reflects the intent of the rule drafter.²⁷ Often times these rules attempt to give solutions to problems that are unforeseen and unanticipated. In those cases, reading the text of the rule rarely yields a complete answer.²⁸ In order to reach an end result consistent with the drafter of the rule, “an inquiry into something other than the instructions of the enacting legislature” must be made, other considerations must be taken.²⁹ In taking “those other considerations, the institution entrusted with the decision must make reference to considerations of both fact and policy.”³⁰

¶9 This is not to be confused with equating textualism to formalism, and by syllogism regarding a textualist interpretation as one lacking qualifying considerations.³¹ In interpreting the text of a statute, natural assumptions are made. Practical reason coexists with statutory interpretation, because a “complex judgment about how to best harmonize text, legislative history, statutory purpose, and contemporary public policy” must be made.³² The take away message is that when other considerations are not made in conjunction with applying the rule, the purpose of the rule itself ceases to have import.

C. Formalism Fails

¶10 As discussed *supra*, one of the greatest assets of a specialized patent court—apart from the opportunity to use their specialization to influence policy—was the ability to bring precision and uniformity to patent law. In terms of uniformity, it can hardly be argued that the body of patent law is less uniform than before the FCIA of 1982. Prior to the creation of the Federal Circuit, forum shopping at the trial court level in order to lie within an appeals circuit with favorable patent laws was an all too common problem.³³ The fact that only one appeals court now hears patent cases can undoubtedly be a mark of increased uniformity. Precision is less concrete of a matter. Precision being defined here as Professor Dreyfuss defined it in her seminal analysis of the Federal Circuit: precise as in reproducible in a way that permits the PTO, lower courts, and other legal actors to apply it with ease.³⁴ Patent law commentators and empirical evidence suggest that the CAFC’s formalistic approach actually achieves less predictability than a pragmatic, policy inculcated approach.

¶11 Intuitively, one would think that a rule formalist approach would bring the uniformity and precision desired by a specialized court for patent appeals. Indeed, the CAFC does not hide the attempt to use bright-line rules at every turn. When an appellant attempted to explain the difficulty of drafting a bright-line rule for patent-eligible subject matter, one

87 (1990) (“This assessment is not a mechanical exercise of uncovering an actual legislative decision. It calls for a frankly value-laden judgment.”)

²⁷ See *id.*; Alexander, *supra* note 24, at 531; Daniel Farber, *The Inevitability of Practical Reason: Statutes, Formalism, and the Rule of Law*, 45 VAND. L. REV. 533, 541 (1992).

²⁸ See Alexander, *supra* note 24, at 531; Farber, *supra* note 27, at 541; Sunstein, *supra* note 26, at 2086-87.

²⁹ Sunstein, *supra* note 26, at 2086-87. See also Alexander, *supra* note 24, at 531; Farber, *supra* note 27, at 541.

³⁰ Sunstein, *supra* note 26, at 2086-87.

³¹ See Farber, *supra* note 27, at 541.

³² *Id.*

³³ See Commission on Revision of the Federal Court Appellate System, Structure, and Internal Procedures: Recommendations for Change 58-59 (1975).

³⁴ Dreyfuss, *supra* note 1, at 1 (“I consider whether the law is more precise, in the sense of being reproducible—is the law articulated in a way that permits the PTO, lower courts, and practitioners to apply it with greater ease.”)

Federal Circuit judge responded, “How about a dim-line rule? Or any kind of rule?”³⁵ These rule formalist precedents set by the Federal Circuit approaches have actually brought less precision to patent law.³⁶

¶12 Commentators have argued that due to the nature of patent law, a lack of predictability is to be expected, as it is inherent to the field. It was once noted that, “The Patent system is strange and weird territory to most judges. They have never seen anything that resembles it.”³⁷ However the uncertainty of patent law cannot be blamed on the trial court judges alone.³⁸ Statistical analysis shows increased variance in the percentage of patent cases successfully appealed since the creation of the Federal Circuit.³⁹ Under a general assumption that the motivations under which parties select fact scenarios for appeal have remained roughly constant, an increase in the variability of successful appeal rates means that parties have less prediction power in Federal Circuit decision making.⁴⁰ Therefore, “the Federal Circuit and its doctrinal changes have brought less certainty and predictability to patent enforcement.”⁴¹ Even if the district courts frequently err in claim construction—getting reversed on appeal under *de novo* review⁴²—increased variance should only occur if the parties involved in litigation cannot predict the outcome of appellate claim construction.⁴³ Theoretically, *de novo* review would increase the predictability of appellate claim construction in comparison to a level of fact-finding deference.⁴⁴ Therefore, the imprecision must lie with the practice and procedure of the appellate decision maker.⁴⁵

¶13 In fact, the empirical evidence shows that precision and predictability has fallen since the inception of the Federal Circuit.⁴⁶ The CAFC’s high rate of district court reversals show that “pre-trial predictability” and “efficient patent litigation” remain a theoretical construct rather than an attainable goal.⁴⁷ In one empirical critique of the Federal Circuit’s predictability, even after years of claim construction as a matter of law, the results were neatly summarized, “The reversal rate ought to be going down, not up.”⁴⁸

³⁵ Oral Argument at 11:48, In re Bilski, 545 F.3d 943 (2008) (No. 2007-1130), available at <http://www.cafc.uscourts.gov/oral-argument-recordings/all/bilski.html>. See also Chief Judge Paul Redmond Michel, Keynote Address at the Northwestern University Journal of Technology and Intellectual Property Symposium (Mar. 6, 2015) (“Give me a good rule, give me a bad rule, just give me certainty.”)

³⁶ See Nard & Duffy, *supra* note 1, at 1621.

³⁷ Abe Fortas, *The Patent System in Distress*, 53 J. PAT. OFF. SOC’Y 810 (1971).

³⁸ *But see* Moore, *supra* note 3, at 1 (advancing the argument that lack of technical experience among district court judges is the reason for high reversal rates of claim construction).

³⁹ See Glynn S. Lunney, Jr., *Patent Law, the Federal Circuit, and the Supreme Court: A Quiet Revolution*, 11 SUP. CT. ECON. REV. 1, 74 (2004).

⁴⁰ *See id.*

⁴¹ *Id.*

⁴² *See, e.g.*, *Cybor Corp. v. FAS Techs.*, 138 F.3d 1448, 1454-56 (Fed. Cir. 1998)(en banc)

⁴³ *See* Lunney, *supra* note 39, at 76 n.192.

⁴⁴ *See Id.*

⁴⁵ *See* Dreyfuss, *supra* note 2, at 772-86; Kimberly A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 Lewis & Clark L. Rev. 231, 246-47 (2005); Nard & Duffy, *supra* note 1, at 1621.

⁴⁶ *See* R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PA. L. REV. 1105, 1163-70 (2004).

⁴⁷ *See* Christian A. Chu, *Empirical Analysis of the Federal Circuit’s Claim Construction Trends*, 16 BERKELEY TECH. L.J. 1075, 1100 (2001).

⁴⁸ Moore, *supra* note 45, at 246-47.

¶14 The fault lies with the rule based approach. The language of a patent cannot be technically and textually analyzed to provide a uniform meaning of its boundaries and features.⁴⁹ A patent is not analogous to a deed or will that enumerates property rights in physical and mathematical limits.⁵⁰ A patent claim sketches the intangible boundaries between creations and innovations, naturally resistant to exceptionless rules and objective interpretation.⁵¹ The empirical evidence, a source of mathematical precision, suggests that patent law is more predictable when pragmatic factor considerations are implemented, rather than the CAFC's trend of rule formalism.⁵²

II. PRAGMATISM AND THE SUPREME COURT

¶15 While many empirical studies of Federal Circuit precision have focused on claim construction, other "key areas of expanding uncertainty" have emerged.⁵³ Such as: the doctrine of equivalents, the written description requirement, and patentable subject matter.⁵⁴ Until the summer of 2014, patent-eligible subject matter had been an area of great difficulty for the CAFC. Starting with *Bilski* in 2010, the Supreme Court stepped in five times over three years to vacate, reverse, or correct the CAFC's rulings specifically on the area patent eligible subject matter.⁵⁵ This was in contrast to the general trend of the Supreme Court to stay away from patent law.⁵⁶

¶16 This battle between the CAFC's formalist, rule-based approach and the Supreme Court's holistic, pragmatic approach is the ideal illustration to illuminate the institutional and jurisprudential problems created by the CAFC's refusal to incorporate policy considerations into their decision making. The battle closes as proof of the uniformity and predictability that can be achieved when the CAFC intertwines policy considerations into the adjudication of patent disputes.

¶17 The constant overruling of the Federal Circuit by the Supreme Court could be characterized as combative or creating tension.⁵⁷ However, when each case is viewed as a piece of the saga described infra, the story reveals that the Supreme Court is attempting to hand a pragmatic framework to the Federal Circuit. And in doing that, they are delegating the job of creating a policy inculcated body of patent law to the institution with specialized expertise, the Federal Circuit.

⁴⁹ See Lunney, *supra* note 39, at 75.

⁵⁰ See *Id.*

⁵¹ See *Id.*

⁵² See *Id.* at 78.

⁵³ See Gideon Parchomovsky & R. Polk Wagner, *Patent Portfolios*, 154 U. PA. L. REV. 1 (2005)

⁵⁴ See *Id.* at 40.

⁵⁵ *Bilski v. Kappos*, 561 U.S. 593 (2010); *Mayo Collaborative Servs. v. Prometheus Labs.*, 130 S.Ct. 3543 (2010); *Mayo Collaborative Servs. v. Prometheus Labs.*, 132 S.Ct. 1289 (2012); *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 132 S.Ct. 1794 (2012); *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S.Ct. 2107 (2013).

⁵⁶ The previous time the Supreme Court addressed patent-eligible subject matter, often considered the threshold issue in patent disputes, was in *Diamond v. Diehr*, 450 U.S. 175 (1981), before the creation of the Federal Circuit.

⁵⁷ 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, 668 & n.58 (2009); Dreyfuss, *supra* note 2, at 791.

A. *The Slippery Bilski Slope*

¶18 As mentioned in Part I, the oral arguments in *In re Bilski*⁵⁸ clearly denote the formalist tendencies of the Federal Circuit. However, the CAFC’s obvious commitment to developing a bright-line rule for patent-eligible subject matter went beyond one passing comment. The first third of the appellant’s oral argument was spent discussing which test or hardline rule was controlling.⁵⁹ The court even went as far as asking counsel for the PTO what test the patent office applied in 1952.⁶⁰ Considerations such as economic efficiency of innovation or protecting and developing the storehouse of knowledge of mankind were not discussed.

¶19 The opinion the CAFC released in *Bilski* echoes this sentiment. After dismissing the Congressional definition of process,⁶¹ and discussing several Supreme Court precedents more than 25 years old,⁶² the Federal Circuit filtered the underlying legal question as what test or criteria governs the determination as to whether a claim to a process is patentable under 35 U.S.C. §101 (2006).⁶³ Although the CAFC did consider other tests,⁶⁴ they ended up deciding to “reaffirm that the machine or transformation test . . . is the governing test for determining patent eligibility of a process under §101.”⁶⁵

¶20 The way the Supreme Court approached the issue in *Bilski v. Kappos*⁶⁶ was drastically different. The petitioner opened his arguments by claiming that the “rigid and narrow” machine or transformation test for all methods should be reversed.⁶⁷ The Justices of the court responded with the logical follow-up of how such a broad, expansive test would be applied to other everyday methods.⁶⁸ In fact, the court didn’t even mention the word “test” until Justice Scalia asked about the patent-ineligible Bell patent,⁶⁹ which actually

⁵⁸ 545 F.3d 943 (Fed. Cir. 2008)

⁵⁹ At various points the court remarked, “Are you advocating for the useful, concrete, and tangible test?” (at 2:50); “Is transformation required under your rule” (at 4:18); “What do you consider the State Street test to be?” (at 5:20); “That doesn’t sound like much of a test” (at 6:20); “Do we need a test in this area?” (at 7:00); “Isn’t the test in *Diehr* from the Supreme Court, ‘transforming or reducing an article to a different state or thing?’” (at 9:20); “We need to have some principle, or some test, or some factors, or some way of drawing a line.” (at 16:23). Oral Argument, *In re Bilski*, 545 F.3d 943 (2008) (No. 2007-1130), available at <http://www.cafc.uscourts.gov/oral-argument-recordings/all/bilski.html>

⁶⁰ Oral Argument at 44:05, *In re Bilski*, 545 F.3d 943 (2008) (No. 2007-1130), available at <http://www.cafc.uscourts.gov/oral-argument-recordings/all/bilski.html>. Even if such a test existed, trying to apply a test used for technologies over half a century old to current day patents would not be in furtherance of innovation and technological progress.

⁶¹ *In re Bilski*, 545 F.3d 943, 951 n.3 (2008) (“Congress provided a definition of ‘process’ However, this provision is unhelpful given that the definition itself uses the term ‘process’”).

⁶² *Id.* at 951-55.

⁶³ *Id.* at 955.

⁶⁴ Namely the Freeman-Walter-Abele test; the useful, concrete, and tangible test; the technological arts test; and “others not so enumerated.” *Bilski*, 545 F.3d at 958-61.

⁶⁵ *Id.* at 956.

⁶⁶ 561 U.S. 593 (2010).

⁶⁷ Oral Argument at 0:19, *Bilski v. Kappos*, 561 U.S. 593 (2010) (No. 08-964) (arguing the test was contrary to the principle that §101 “should be read broadly to accommodate unforeseen advances in the useful arts.”).

⁶⁸ Including: “So an estate plan, tax avoidance, how to resist a corporate takeover, how to choose a jury, all of those are patentable?” Ginsberg, J. (at 3:40); “Anything that helps any businessman succeed is patentable because we reduce it to a number of steps, explain it in general terms, file our application, granted?” Breyer, J. (at 4:40); “Why not patent the method of speed dating?” Sotomayor, J. (at 5:45). Oral Argument, *Bilski v. Kappos*, 561 U.S. 593 (2010) (No. 08-964).

⁶⁹ See *Dolbear v. American Bell Tel. Co.*, 126 U.S. 1 (1888)

met the machine or transformation test.⁷⁰ The petitioner ended their argument with an appeal to disregard the machine or transformation test as the sole decision maker of patentable subject matter; instead focusing the analysis on whether an abstract idea is attempting to be patented.⁷¹

¶21 This analysis of abstract idea preemption as opposed to a hardline test, was adopted in the Supreme Court’s opinion. The Court emphasized that the case law adopting the exceptions of laws of nature, physical phenomena, and abstract ideas to §101 patent eligible subject matter was not a license for the judiciary to impose other rules inconsistent with the statute’s purpose and design.⁷² The CAFC’s adoption of “the machine or transformation test as the sole test for what constitutes a ‘process’ (as opposed to just an important and useful clue) violates” the statute’s purpose and design.⁷³ The Court went on to acknowledge that the standards for granting patents do change, because times and technology change, and that patent law should be a body of law that is flexible to change.⁷⁴ Especially § 101, which is a “dynamic provision designed to encompass new and unforeseen inventions.”⁷⁵ By applying a rigid test, such as the machine or transformation test, a court would “risk obscuring the larger object of securing patents for valuable inventions without transgressing the public domain.”⁷⁶

¶22 Concluding the lengthy discussion about the merits of the patent system, the Court refused to adopt a “categorical rule[] that might have wide-ranging and unforeseen impact.”⁷⁷ Rather, the Court affirmed the ruling of patent-ineligibility in this case, on the grounds that it claimed an abstract idea.⁷⁸ However, after categorically refuting the CAFC’s jurisprudence on patent-eligible subject matter,⁷⁹ the Supreme Court acknowledged that “patent law faces a great challenge in striking the balance between protecting inventors and not granting monopolies over procedures that others would discover by. . . application of general principles.”⁸⁰ The Court refused to take a position on where that balance lies, and instead directed the Federal Circuit to take a cost/benefit approach in using their decisions to direct the balance.⁸¹ The Court knew that this was just the start of defining the bounds of patent-eligible subject matter under § 101, and wanted to delegate the computer software and medical diagnostic techniques to the specialized

⁷⁰ Oral Argument at 24:28, *Bilski v. Kappos*, 561 U.S. 593 (2010) (No. 08-964).

⁷¹ Oral Argument at 53:28, *Bilski v. Kappos*, 561 U.S. 593 (2010) (No. 08-964).

⁷² *See Bilski v. Kappos*, 561 U.S. 593, 603 (2010).

⁷³ *See Id.*

⁷⁴ *See Id.* at 605.

⁷⁵ *Id.*

⁷⁶ *Id.* at 606.

⁷⁷ *Id.* at 609.

⁷⁸ *See Id.*

⁷⁹ *Id.* at 612 (“[N]othing in today’s opinion should be read as endorsing interpretations of §101 that the [CAFC] has used in the past”).

⁸⁰ *Id.* at 606.

⁸¹ *Id.* (“Section 101’s terms suggest that new technologies may call for new inquiries.”)

court, the Federal Circuit.⁸² Albeit, with the intention the CAFC would consider those technologies in light of the policy-integrated approach the Court used in *Bilski*.⁸³

B. Confusion in the Mayo Days

¶23 When the Supreme Court initially received the appeal for *Prometheus v. Mayo*⁸⁴ they granted certiorari, vacated the CAFC's holding, and remanded for reconsideration in light of their holding in *Bilski*.⁸⁵ This was a pretty clear sign that the Supreme Court intended for the CAFC to shift its decision making away from rule formalism and towards a more policy oriented approach. The CAFC missed the sign.

¶24 After acknowledging that the Supreme Court rejected the machine or transformation test as the definitive rule for determining the patent-eligibility of a method claim,⁸⁶ the CAFC proceeded to decide *Mayo* definitively under the machine or transformation test.⁸⁷ The CAFC decided the Supreme Court's decisions did not dictate a change in their adjudication process,⁸⁸ and that the preemption of a law of nature was not a concern, because the patent in question related to an application of that law.⁸⁹

¶25 In their second reversal of the CAFC's *Mayo* ruling, the Supreme Court applied a policy intertwined reasoning similar to their opinion in *Bilski*. Starting with a discussion of the storehouse of public knowledge, the Court made clear that a rigid inquiry would be made to patents asserting methods comprising laws of nature, natural phenomena, and abstract ideas.⁹⁰ In pointing to a century of Supreme Court precedents, the Court warned against interpreting patent statutes as a series of rules that would make "patent eligibility depend simply on the draftsman's art."⁹¹ Rather, the "principles under lying the prohibition against patents for laws of nature, natural phenomena, and abstract ideas" should be focused on.⁹² While recognizing that the patent system exists to promote innovation and reward costly research into new discoveries, the danger of inhibiting future innovation becomes realized when a "patented process amounts to no more than an instruction to apply the natural law."⁹³ It was a long established precedent that patents that "claim processes

⁸² Oral Argument at 49:50, *Bilski v. Kappos*, 561 U.S. 593 (2010) (No. 08-964). "This case would provide an unsuitable vehicle for resolving the hard questions because the case doesn't involve computer software or medical diagnostic techniques, and therefore. . .you will decide this case, and most of the hard questions remain unresolved." (Argument by Malcolm Stewart); "But this case could be decided without making any bold step. . .Even the Federal Circuit didn't say it was the test. It said it is for now. We know that things we haven't yet contemplated may be around the corner, and when they happen, we will deal with them." (Response by Ginsberg, J.).

⁸³ See *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 130 S.Ct. 3543 (2010).

⁸⁴ See *Prometheus Labs., Inc. v. Mayo Collaborative Servs.*, 581 F.3d 1336 (2009).

⁸⁵ See *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 130 S.Ct. 3543 (2010).

⁸⁶ See *Prometheus Labs., Inc. v. Mayo Collaborative Servs.*, 628 F.3d 1347, 1352 (2010).

⁸⁷ *Id.* at 1355 ("[T]he treatment methods claimed in Prometheus's patent in suit satisfy the transformation prong of the machine or transformation test.").

⁸⁸ *Id.* ("We do not think that either the Supreme Court's GVR Order or the Court's *Bilski* decision dictates a wholly different analysis.")

⁸⁹ See *Id.*

⁹⁰ *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S.Ct. 1289, 1293 (2012)

("Monopolization of those tools through the grant of a patent might tend to impede innovation more than it would tend to promote it.")

⁹¹ *Id.* at 1294.

⁹² *Id.*

⁹³ *Id.* at 1301.

that too broadly preempt the use of a natural law” should be invalidated.⁹⁴ In closing their opinion, the Supreme Court reiterated the balancing act that the judiciary (and the CAFC is surely no exception) must apply in deciding the complex social issues inevitably tied up in patent disputes.⁹⁵

¶26 The contrast of the different oral arguments used in *Mayo*, at the different stages of the appellate process, highlights the uncertainty created by the split jurisprudence of the competing high courts of patent law. One appellant, arguing before the Federal Circuit, opened his argument with, “There are many different ways to think about this case, all of which involving machines and transformations of matter.”⁹⁶ While one petitioner, arguing before the Supreme Court, opened his argument with, “The problem with the Prometheus patent is its broad preemption of a physical phenomenon, which prevents others like Mayo Clinic from offering a better metabolite test with more accurate numbers. And this is a huge practical problem for patients.”⁹⁷ While the CAFC’s questions focused on the machine or transformation test,⁹⁸ the Supreme Court’s line of questioning circled around the idea of the preemption of a natural law and the negative real-life consequences that could have.⁹⁹ With one high court arguing form over function and the other applying a pragmatic outlook to resolving disputes, the increase in success rate variance makes sense.¹⁰⁰

¶27 When the Supreme Court originally received the appeal from *Ass’n for Molecular Pathology v. U.S. Patent & Trademark Office*¹⁰¹ they granted certiorari, vacated the CAFC’s holding, and remanded in light of the Court’s decision in *Mayo*, a familiar pattern.¹⁰² Following the Supreme Court’s remand, the CAFC accepted additional briefing and held an en banc argument.¹⁰³ While the Supreme Court’s holding in *Mayo*, did not

⁹⁴ *See Id.* at 1294.

⁹⁵ *Id.* at 1305 (“Patent protection is after all, a two-edged sword. On the one hand, the promise of exclusive rights provides monetary incentives that lead to creation, invention, and discovery. On the other hand, that very exclusivity can impede the flow of information that might permit, indeed spur, invention, by, for example, raising the price of using the patented ideas once created, requiring potential users to conduct costly and time-consuming searches of existing patents and pending patent applications, and requiring the negotiation of complex licensing arrangements.”)

⁹⁶ Oral Argument at 1:54, *Prometheus Labs., Inc. v. Mayo Collaborative Servs.*, 628 F.3d 1347 (2010) (No. 2008-1403).

⁹⁷ Oral Argument at 0:30, *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S.Ct. 1289 (2012) (No. 10-1150).

⁹⁸ Near the end of oral arguments, the court asked, “But when you administer the thiopurine. . . doesn’t it effect a transformation, which is the *Bilski* case?” When the appellees admitted that it did in the narrow context, he was cut off mid-sentence with, “Well QED. Isn’t that the answer then? For §101.” Oral Argument at 40:43, *Prometheus Labs., Inc. v. Mayo Collaborative Servs.*, 628 F.3d 1347 (2010) (No. 2008-1403).

⁹⁹ “I think that the difference that people are noting. . . all you have done is pointed out a set of facts that exist in the world, and are claiming protection for something that anybody can try to make use of in any way, and you are saying you have to pay us.” (Kagan, J. at 46:00); “Suppose somebody thinks you’re wrong, that the numbers you’ve come up with are wrong. And they want to develop better numbers that will—will help the medical profession. Your patent occludes them from doing that.” (Scalia, J. at 53:15) Oral Argument, *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S.Ct. 1289 (2012) (No. 10-1150).

¹⁰⁰ *See supra* Part I.

¹⁰¹ 476 Fed. Appx. 890 (2012).

¹⁰² *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 132 S.Ct. 1794 (2012).

¹⁰³ *Ass’n for Molecular Pathology v. U.S. Patent & Trademark Office*, 689 F.3d 1303, 1308 (2012).

track directly on to the claims most at issue in *Ass'n for Molecular Pathology*,¹⁰⁴ the Supreme Court still insisted that the Federal Circuit reconsider its holding in light of the *Mayo* decision.¹⁰⁵ This might seem puzzling until viewed in the light of the battling methodologies that headlined the competing decisions and arguments in *Bilski* and *Mayo*.

¶28 If the Supreme Court wanted the CAFC to apply a similar policy oriented approach in considering the pragmatic ramifications of different holdings involving patent eligible subject matter, it would do so by asking the Federal Circuit to reconsider its previous policy inculcated rationales. Rather than define a rule that might turn out to be too broad or narrow as new technologies entered the scope of patent law, the Supreme Court was trying to get the CAFC to adopt more of a balancing approach that was displayed in the *Bilski* and *Mayo* holdings.¹⁰⁶ Again, the CAFC missed the sign.

¶29 The CAFC started their opinion with a discussion of what the case was not about. Completely shutting out the societal considerations¹⁰⁷ that the Supreme Court wanted them to balance, the CAFC focused their analysis on whether the claims “meet the threshold test for patent-eligible subject matter under 35 U.S.C. §101.”¹⁰⁸ The CAFC also rejected the argument that because the particular composition of matter in this case was more analogous to information—based on its use to a person having ordinary skill in the art—and information being unequivocally unpatentable would render these claims covering patent-eligible subject matter.¹⁰⁹ The CAFC did not consider the implications of allowing a patent on information,¹¹⁰ rather they analyzed the claims under the same lens as any other composition of matter: a series of atoms joined by covalent bonds.¹¹¹ When presented with the argument that allowing a patent on these naturally occurring molecules would preempt others from researching and exploring these fundamental concepts of nature, similar to the rationale used in *Mayo*,¹¹² the Federal Circuit stated that because the claims here were objects (which happened to be objects found in nature), not laws of nature, this preemption

¹⁰⁴ The holding in *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S.Ct. 1289 (2012) dealt with the methodology that should be used in deciding the patent-eligible nature of method claims that comprise laws of nature under §101. By contrast, the main claims at issue in *Ass'n for Molecular Pathology v. U.S. Patent & Trademark Office*, 476 Fed. Appx. 890 (2012) dealt with the patent-eligible nature of compositions of matter that may occur in nature under §101.

¹⁰⁵ *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 132 S.Ct. 1794 (2012).

¹⁰⁶ *Bilski v. Kappos*, 561 U.S. 593, 606 (2010); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S.Ct. 1289, 1305 (2012).

¹⁰⁷ “It is important to state what this appeal is not about. It is not about whether individuals suspected of having an increased risk of developing breast cancer are entitled to a second opinion. Nor is about whether [the patent holder] has acted improperly in its licensing or enforcement policies. . . . The question is also not whether is it desirable for one company to hold a patent or license covering a test that may save people’s lives.” *Ass'n for Molecular Pathology v. U.S. Patent & Trademark Office*, 689 F.3d 1303, 1324 (2012).

¹⁰⁸ *Id.*

¹⁰⁹ *Id.* at 1330.

¹¹⁰ *Id.* (“Whether its unusual status as a chemical entity that conveys genetic information warrants singular treatment under the patent laws. . . is a policy question that we are not entitled to address.”)

¹¹¹ *See Id.* at 1328.

¹¹² *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 132 S.Ct. 1289, 1294 (2012). “The remand for this case for reconsideration in light of *Mayo*, might suggest. . . that the composition claims are mere reflections of a law of nature. . . . [T]hey are not, any more than any product of man reflects and is consistent with a law of nature. Everything and everyone comes from nature, following its laws.” *Ass'n for Molecular Pathology v. U.S. Patent & Trademark Office*, 689 F.3d 1303, 1331 (2012).

argument was without merit.¹¹³ In other words, the arguments and reasoning in *Mayo* did not apply, because this case was not *Mayo*.

¶30 The second time the Supreme Court granted certiorari they were more explicit about the balancing tests they wanted to employ in the §101 analysis, “[P]atent protections strike a delicate balance between creating ‘incentives that lead to creation, invention, and discovery’ and ‘impeding the flow of information that might permit, indeed spur, invention.’”¹¹⁴ Perhaps, to underline that this is the same pragmatic balancing approach the Supreme Court had been using for the last four years, they added the line, “We must apply this well-established standard to determine whether Myriad’s patents claim [patent-eligible subject matter].”¹¹⁵

¶31 In applying this standard the Supreme Court reversed in part, and affirmed in part the Federal Circuit’s rulings of patent eligibility.¹¹⁶ This time the message was clear, there is no line where on one side patent eligible subject matter lies, and on the other lies patent-ineligible subject matter. It must be a holistic determination weighing the social implications on either side of the decision, coming down on whichever course best coincides with the purpose and design of the Patent Act.

C. Affirmed Agreement in Alice Corp.

¶32 This time the CAFC noticed the sign. In *CLS Bank v. Alice Corp.* the CAFC dealt en banc with determining whether method claims related to business practice and computer programs were directed to patent eligible subject matter.¹¹⁷ First, the Federal Circuit admitted its jumbled and confusing §101 jurisprudence over the previous years.¹¹⁸ Next, the CAFC outlined, in plain language, the steps in conducting a §101 inquiry.¹¹⁹ The CAFC explained the previous unpredictability in differentiating claims that would preempt laws of nature, natural phenomena, or abstract ideas from claims that “embody, use, reflect, rest upon, or apply” those fundamental tools can be resolved by reliance on the Supreme Court’s §101 jurisprudence.¹²⁰ And that while these applications may “feel subjective and unsystematic” and trending “towards the metaphysical, littered with unhelpful analogies and generalizations”, the Supreme Court’s framework provides predictability for practitioners.¹²¹

¹¹³ *Ass’n for Molecular Pathology v. U.S. Patent & Trademark Office*, 689 F.3d 1303, 1331 (2012) (“That is true of all inventions; during the term of the patent, unauthorized parties are ‘preempted’ from practicing the patent, but only for its limited term.”).

¹¹⁴ *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S.Ct. 2107, 2116 (2013).

¹¹⁵ *Id.*

¹¹⁶ *See Id.* at 2107.

¹¹⁷ *See CLS Bank Int’l v. Alice Corp. Pty. Ltd.*, 717 F.3d 1269 (2013).

¹¹⁸ *Id.* at 1276 (“Section 101 appears deceptively simple on its face, yet its proper application to computer-implemented inventions and in various other fields of technology has long vexed this and other courts.”)

¹¹⁹ “We must first ask whether the claimed invention is a process, machine, manufacture, or composition of matter. If not, the claim is ineligible under §101. If the invention falls within one of the statutory categories, we must then determine whether any of the three judicial exceptions nonetheless bars such a claim—is the claim drawn to a patent-ineligible law of nature, natural phenomenon, or abstract idea? If so the claim is not patent eligible. Only claims that pass both inquiries satisfy §101.” *Id.* at 1277.

¹²⁰ *Id.*

¹²¹ *Id.*

¶33 This framework turns primarily on the pragmatic likelihood of a claim preempting a law of nature, natural phenomena, or abstract idea from the common repository of mankind.¹²² “First and foremost is an abiding concern that patents should not be allowed to preempt the fundamental tools of discovery—those must remain ‘free to all and reserved exclusively to none.’”¹²³ The Federal Circuit even recognized that “overly formalistic approaches to subject-matter eligibility[] invite manipulation” and result in holdings that run in contradiction of the purpose and design of patent law.¹²⁴ In response to the newly realized policy integrated approach to patent-eligible subject matter, the Supreme Court affirmed the holdings of *Alice Corp.*¹²⁵

III. MOVING PAST PATENT-ELIGIBLE SUBJECT MATTER

¶34 Now that the Federal Circuit and the Supreme Court agree on a function-over-form, practical methodology of determining patent-eligible subject matter that weighs societal ramifications, predictability will return and the variance of the rate of successful appeals should decrease.¹²⁶ However, §101 patent-eligible subject matter is just one facet of patent law. The other “key areas of expanding uncertainty” still exist, namely claim construction, doctrine of equivalents, and written description.¹²⁷

A. *The Framework for Pragmatism*

¶35 From the example in Part II, the Supreme Court in *Bilski v. Kappos* grew its pragmatic arguments from the pre-existing law of four areas of patent-eligible subject matter and the three exceptions.¹²⁸ By starting from that framework, the Court was able to tie in concerns about preempting others from applying laws of nature and reserving tools of innovation to the public domain so that they may be available to all and exclusive to none.¹²⁹ Once those policy considerations were established within pre-existing law, the Supreme Court was able to expand upon them in *Mayo* and *Myriad* by enumerating a balancing test that weighed rewarding those who discover new and useful things with the danger of granting patents that would inhibit future innovation.¹³⁰ Using the evolution of

¹²² *See Id.*

¹²³ *Id.* at 1280.

¹²⁴ *Id.* at 1281 (“Finally, the cases urge a flexible, claim-by-claim approach to subject-matter eligibility that avoids rigid line drawing. Bright-line rules may be simple to apply, but they are often impractical and counterproductive when applied to §101. Such rules risk becoming outdated in the face of continual advances in technology—they risk ‘freezing process patents to old technologies’, leaving no room for the revelations of the new, onrushing technology.’ Stringent eligibility formulas may also lead to misplaced focus, requiring courts to ‘pose questions of such intricacy and refinement that they risk obscuring the larger object of securing patents for valuable inventions without transgressing the public domain.’”)

¹²⁵ *See Alice Corp. Pty. Ltd. v. CLS Bank Int’l*, 134 S.Ct. 2347 (2014).

¹²⁶ *See Lunney, supra* nota 39, at 74 (noting that a lower variance in appellate success rate translates to higher predictability).

¹²⁷ *See supra* Part II.

¹²⁸ The four areas of statutory patent-eligible subject matter: process, machine, manufacture, or composition of matter, while keeping in mind the three judicially crafted exceptions of laws of nature, natural phenomena, or abstract ideas. *Bilski v. Kappos*, 561 U.S. 593, 606 (2010).

¹²⁹ *See Id.*

¹³⁰ *See Mayo Collaborative Servs. v. Prometheus Labs, Inc.*, 132 S.Ct. 1289, 1301 (2012); *Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S.Ct. 2107, 2116 (2013).

patent-eligible subject matter jurisprudence as a model, the courts can work on solidifying other "key areas of uncertainty." The idea is to construct arguments that start from current, existing formalistic law and add layers of considerations that derive from social and policy-orientated rationales.

B. *The Current Doctrine of Equivalents*

¶36 For example, the doctrine of equivalents is one of the sources of expanding uncertainty, and it is almost always raised in an infringement suit as patent holders seek to broaden their monopoly.¹³¹ But without it, entrepreneurs looking to profit off of innovators' ingenuity invariably instigate unfair market advantages. The doctrine essentially says that if the alleged infringing product does not literally infringe the terms of the patent, there may still be infringement of the patent if it's close enough.

¶37 To make this determination of "close enough" the Federal Circuit applies a variety of formalistic tests. Early doctrine of equivalents case law set a tripartite test that analyzed if the allegedly infringing elements if they "perform[] substantially the same function in substantially the same way to obtain the same result."¹³² The tripartite test remained for several decades before being slightly amended by the Federal Circuit in *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*¹³³ In that case, the CAFC stated that "the doctrine of equivalents rests on the substantiality of the differences between the claimed and accused products or processes assessed according to an objective standard." While not explicitly rejecting the Federal Circuit's test nor rejecting the tripartite test, the Supreme Court reversed the holding in *Warner-Jenkinson* and held that "[d]ifferent linguistic frameworks may be more suitable to different cases, depending on their particular facts."¹³⁴ To this day, arguments are made in front of the Federal Circuit that apply both the tripartite test and the equally formalistic *Warner-Jenkinson* test.

¶38 Without delving deeper into the history of the doctrine of equivalents, it suffices to say that it has not always been applied in a predictable manner.¹³⁵ To show the pros and cons of broad and narrow applications of the doctrine of equivalents, suppose an inventor "A" in the late 1990s claimed a machine that included an interface with a laptop computer. Years later, another inventor "B" started using that same invention, but with an interface to a tablet computer. A would argue the doctrine of equivalents precludes B from using her machine because the tablet is an equivalent of the laptop. B would argue that the substitution of a tablet is unique enough and adds some value to the machine outside of what A originally claimed.

¶39 With a broad application of the doctrine of equivalents B would be blocked from pursuing a potentially beneficial invention and disclosing it to the public for their benefit. With a narrow application, all of A's hard work and resources in inventing his machine

¹³¹ See John R. Thomas, *Claim Re-Construction: The Doctrine of Equivalents in the Post-Markman Era*, 9 LEWIS & CLARK L. REV. 153, 154 (2005).

¹³² *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 608 (1950)

¹³³ 62 F.3d 1512 (1995).

¹³⁴ *Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co.*, 520 U.S. 17, 40 (1997)

¹³⁵ See Michael J. Meurer & Craig Allen Nard, 93 Geo. L.J. 1947, 1948-49 (2005) ("Perhaps no doctrine in patent law is as controversial as the Doctrine of Equivalents[]. Despite nearly two hundred years of development, patent law lacks a coherent vision of a doctrine that holds great intuitive appeal.")

would be lost as competitors could use his invention by changing the type of computer involved.

¶40 Worse yet, if an uneven application of the doctrine is used both sets of negative consequence would result. Computer science changes at such a rate that the fear of a narrow application of the doctrine of equivalents would disincentivize inventors from expending the resources to invent. Their patents would not hold exclusivity long enough to recoup investment costs because of the natural progression of the art. At the same time, B would not pursue her invention for fear that a broad application of the doctrine of equivalents would open her up to litigation liability. This uncertainty in the law prevents the public from access to potential advances in the art and slows progress.

C. Application of the Framework for Pragmatism

¶41 To bring precision to this area of patent law, arguments should avoid the temptation of being centered on formalistic attempts to cabin abstract ideas. Rather, a pragmatic approach that takes into account policy considerations and economic reasoning is more likely to bring precision. For example, a sliding scale balancing test that weighs the rate of change, the amount of unpredictability, and the cost of experimentation within the art would provide judges with a range of considerations on which to decide within the best designs and intentions of the patent act.

¶42 The first factor of this balancing test is the rate of change in the relevant art. The faster the change in the art, the broader the application of the doctrine of equivalents should be. The substitution of a tablet for a laptop is the product of the rapid advancement of computer science and should be seen as equivalents. In contrast, an art that changes slower than the lightspeed progress of computer science—such as organic chemistry—should have a narrower application of the doctrine of equivalents.

¶43 The second factor of this balancing test is the amount of unpredictability in the relevant art. The more unpredictable the art is, the more likely it is that an equivalent element would fall outside the literal limitations of a patent claim. Therefore more unpredictable arts should have a broader doctrine of equivalents scope as opposed to arts where the claim drafter should have been able to adequately state the limits of her claim.

¶44 The final factor of this balancing test is the cost of experimentation. If experimentation in a particular field has higher costs there is a greater danger of an equivalent claim element preventing recoup of investment capital. In order to keep incentives for inventors intact, a broader scope of the doctrine of equivalents should be applied to arts that require a greater investment of resources.

¶45 Conceivably, there is some overlap between these factors. The rate of progress in an art would be plausibly related to how predictable experimentation would be. Similarly, the unpredictability of that experimentation would often be correlated to the cost of experimentation. That is not a problem. The idea is to give the judges flexibility to the policy and economic considerations into their judgment, regardless of how the policy and economic considerations blend against each other.

¶46 The same principles of traditional doctrine of equivalents tests would still be applied in combination with these factors. In the A and B example, the balancing test would lean on the side of sliding the scale for doctrine of equivalents towards a broader, more encompassing scope. However, if the new technology added something substantially new,

so that some different result was achieved or the result was achieved in a different way, there would be no infringement.

¶47 This is one example of applying the lessons learned from the progression of patent-eligible subject matter to increase precision in patent law. There are other ways to apply these lessons in other areas of uncertainty in patent law. The Federal Circuit being a specialized judiciary, charged to be the uniform voice of patent law, is in the prime position to instigate this charge for precision.

CONCLUSION

¶48 Decades before the creation of the Federal Circuit, arguments were made that a specialized appellate court to hear patent cases was needed.¹³⁶ There were two purposes for this specialized court. One, to bring uniformity (and thereby precision) to a nationwide system of patent law. Two, after hearing more patent cases than any other court, this specialized court would be able to use their expertise to effectuate changes in patent law that would be beneficial to the system. The CAFC attempted to accomplish these goals by a rigid formalistic application of rules. Empirical evidence has shown that this was not effective.¹³⁷ Worse still, was when the CAFC continued this formalist jurisprudence in the face of Supreme Court decision making that adopted a more policy laden approach.

¶49 Now that the Supreme Court has shown how to merge the formalistic precedents of patent law, with modern day pragmatic considerations, it is the Federal Circuit's role to apply those principles to other doctrines besides patent-eligible subject matter. As discussed in Part II, the Supreme Court tried to get the Federal Circuit to take that role in their *Bilski* and *Mayo* opinions. This has always been one of the functions the Federal Circuit was designed to play, as shown from the first deliberations around the creation of a specialized patent court that began in the 19th century. By accepting these multi-dimensional arguments, laden with realist concerns, the Federal Circuit can fulfill its other function: bringing predictability to patent law.

¹³⁶ See *supra* Part I.

¹³⁷ See *supra* Part I.