Reasoned Decisionmaking vs. Rational Ignorance at the Patent Office

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ABSTRACT: In the late 1990s, the Patent Office began describing the "primary mission" of its "Patent Business" as being "to help customers get patents"—an administrative approach widely perceived as leading to an exceptionally profligate era of patent granting. Intellectual cover for the agency's approach was provided by the academic theory that the Patent Office could follow a "rational ignorance" approach to patent granting—that the agency could rationally issue patents even where it had gathered only sparse information concerning the merits of claimed inventions and had spent little effort in reasoning through and explaining its decisions to grant rights.

Modern administrative law, however, generally requires agencies to act only through the process of "reasoned decisionmaking," which demands that agencies engage in careful study of the issues presented by any proposed agency action and provide reasoned explanations for their decisions. On both legal and policy grounds, reasoned decisionmaking provides a far superior polestar for guiding the administrative processes of the Patent Office than any theory based on rational ignorance. As a matter of law, the Congress since 1836 has repeatedly rejected any policy favoring the grant of patents through bureaucratic ignorance. As a matter of policy, reasoned decisionmaking provides more comprehensive guidance to the Patent Office not only on how much effort the agency should expend acquiring information, but also on how the agency should exercise its powers in determining the validity of claims to intellectual property rights.

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I. INTRODUCTION

A polestar of modern administrative law is that the Administrative Procedure Act ("APA") imposes a comprehensive system of "reasoned decisionmaking" to regulate agency behavior.¹ That interpretation of the APA has unanimous support on the Supreme Court and has been expressly invoked by Justices on both sides of the Court's ideological divide.² It is also a long-standing principle. The exact phrase dates back more than a third of a century to the Supreme Court's momentous 1983 decision in *Motor Vehicle Manufacturers Ass'n v. State Farm Mutual Automobile Insurance Co.*,³ but the theoretical basis for the doctrine extends to some of the Supreme Court's earliest interpretations of the APA.⁴ Indeed, the precursors of the principle

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^{1.} See, e.g., Allentown Mack Sales & Serv., Inc. v. NLRB, 522 U.S. 359, 374 (1998) (recognizing that the APA "establishes a scheme of 'reasoned decisionmaking'" (quoting Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 52 (1983))).

^{2.} *Id.*; Judulang v. Holder, 565 U.S. 42, 53 (2011) (holding that courts must "ensur[e] that agencies have engaged in reasoned decisionmaking").

^{3.} State Farm, 463 U.S. at 52.

^{4.} See, e.g., Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 415–16 (1971) (holding that courts must engage in "a thorough, probing, in-depth review" to ensure that an agency "could have reasonably believed" in the necessary factual predicates for its decision, and based its decision "on a consideration of the relevant factors," and made no "clear error in judgment"); Burlington Truck Lines, Inc. v. United States, 371 U.S. 156, 167 (1962) (recognizing that "[e]xpert discretion is the lifeblood of the administrative process," but also concluding that "unless we make the requirements for administrative action strict and demanding, *expertise*, the strength of modern government, can become a monster which rules

are evident not only in pre-APA administrative case law, but also in the very aspirations of modern administrative law.⁵

Despite the prominence of reasoned decisionmaking as a constraint on administrative action, the principle has been, until recently, largely absent from judicial decisions reviewing the work of the Patent Office.⁶ The Federal Circuit did not invoke the concept in even a single patent case until 2002 -two decades after the court's creation-and more than a decade would pass before the principle would make another appearance in an appellate patent decision. Indeed, the 2002 case that did require "reasoned decisionmaking" in the Patent Office-In re Lee7-likely did not become a watershed case because the opinion included unfortunate passages that appeared to bar the Patent Office from using "common sense" in evaluating patent applications.8 Subsequent Supreme Court precedent soon made clear that the Lee court was wrong in its hostility toward the agency's use of common sense.9 The controversy over Lee's "common sense" statements seemed to overshadow the far more supportable portions of the opinion recognizing that the Patent Office, just as any other administrative agency, must follow a course of "reasoned decisionmaking" that includes, among other things, a "thorough and searching" factual inquiry and "a full and reasoned explanation" justifying the agency's choice.10

While the constraint of "reasoned decisionmaking" was not being applied to the Patent Office in the late 20th and early 21st centuries, another theory of appropriate administrative behavior for the Patent Office gained prominence and influence. Mark Lemley's article *Rational Ignorance at the Patent Office* posited that "[b]ecause so few patents are ever asserted against a competitor, it is much cheaper for society to make detailed validity determinations in those few cases than to invest additional resources

7. *In re* Lee, 277 F.3d 1338, 1346 (Fed. Cir. 2002) (reversing the Patent Office for failing to engage in "reasoned decisionmaking").

8. *Id.* at 1344 (holding that the "common knowledge and common sense on which the [agency] relied in rejecting [the patent] application are not the specialized knowledge and expertise contemplated by the Administrative Procedure Act").

with no practical limits on its discretion" (quoting New York v. United States, 342 U.S. 882, 884 (1951) (Douglas, J., dissenting)) (emphasis added)).

^{5.} See infra Section II.A and text accompanying notes 41-55.

^{6.} While the agency's official name is currently the "United States Patent and Trademark Office," 35 U.S.C. § 1 (a) (2012), the Office has been known for most of its history as simply the "Patent Office." Because this Essay concerns only the agency's patent law responsibilities, it will refer to the agency as simply the "Patent Office"—a convention that even the Supreme Court has followed in recent years. *See, e.g.*, SAS Inst. Inc. v. Iancu, 138 S. Ct. 1348, 1352 (2018) (referring to the agency as simply the "Patent Office").

^{9.} KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 421 (2007) (stating that rules denying "factfinders recourse to common sense" are "neither necessary under our case law nor consistent with it").

^{10.} In re Lee, 277 F.3d at 1342-43, 1346.

examining patents that will never be heard from again."¹¹ "In short," he argued, "the PTO doesn't do a very detailed job of examining patents, but we probably don't want it to."¹² It is instead better for the agency to remain "rationally ignorant' of the objective validity of patents."¹³

The "rational ignorance" theory always suffered from at least three fundamental difficulties. A first and threshold problem is that the theory, if more than a truism, is hopelessly ill-defined. It is of course true that no governmental agency—and indeed, no individual—makes decisions with perfect information. Because information is costly, rational actors economize on its acquisition. They collect information up to the point where the marginal costs of gathering more information begin to outweigh the marginal benefits. They do not bother collecting information beyond that point because the collection of such additional information is not cost-justified. All of this is, however, a mere truism that follows from the assumptions of rational actors and costly information. In sum, all rational actors can be accurately said to be "rationally ignorant"—and also, for that matter, "rationally informed" —in all contexts.

If a theory of "rational ignorance" is to be more than just a truism, it must refer to some set of conditions that would cause rational actors to remain especially uninformed about facts. In the economic literature, the term "rational ignorance" was originally coined in analyzing the economics of democracy, with the phrase describing why rational voters remain largely ignorant of the effects of their votes.¹⁴ The point was not merely that all actors make decisions with some degree of ignorance, but that voters are especially likely to remain ignorant because each individual vote is so unlikely to change the outcome of an election. In other words, voters remain ignorant because they face a massive collective action problem. Yet government agencies are created precisely to solve collective action problems, so it is at the very least odd—or at least quite vague—to describe a government agency as being rationally ignorant in any way that has any meaningful connection to the concept of "rational ignorance" in its original usage.

^{11.} Mark Lemley, Rational Ignorance at the Patent Office, 95 NW. U. L. REV. 1495, 1497 (2001).

^{12.} Id.

^{13.} Id.

^{14.} See, e.g., Kenneth J. Arrow, *Tullock and an Existence Theorem*, 6 PUB. CHOICE 105, 107 (1969) (reviewing GORDON TULLOCK, TOWARD A MATHEMATICS OF POLITICS (1967), and describing the concept of "rational ignorance" as referring to voters' ignorance, which occurs because it generally "does not pay a voter to acquire information" given that "the effect of any individual vote is so very small"); Anthony Downs, *An Economic Theory of Political Action in a Democracy*, 65 J. POL. ECON. 135, 139 (1957) (introducing the concept of "rational ignorance" in describing the weak incentives that voters have to become informed); *see also* Roger G. Noll & James E. Krier, *Some Implications of Cognitive Psychology for Risk Regulation*, 19 J. LEGAL STUD. 747, 767 (1990) (asserting that "[r]ational ignorance refers to the lack of incentives on the part of citizens to be fully informed about the policy positions a candidate advocates in an election campaign").

A second problem with the "rational ignorance" approach is that, to the extent that it was intended to justify administrative ignorance at the Patent Office, it is not clear that the "rational" part of the label is satisfied. A true system of administrative ignorance would be a mere registration system—i.e., a system where the agency expends no resources on acquiring information and allows subsequent infringement litigation to make all decisions concerning patent validity. Such a system of complete administrative ignorance would, however, destabilize (and, historically, *did* destabilize)¹⁵ the reliability of all patent rights, because the issuance of any patent would not be a meaningful indication of validity. If the agency does not pursue a path of complete ignorance—and the Patent Office is clearly not taking that approach—then it must decide how much it should be rationally ignorant and how much it should be rationally informed. In other words, it must rationally calculate the costs and benefits of acquiring information. There is no indication that the Patent Office has ever made such a calculation.¹⁶

A third fundamental problem with the theory is its lack of a legal basis in modern law. As just mentioned, the Patent Office merely registered patents in its early history (between 1793 and 1836) and thus could fairly be said to be following a course of administrative ignorance.¹⁷ Even then, the agency itself was not being rationally ignorant. Rather, the agency believed it was *legally constrained* to follow that course. The question whether such legallyimposed administrative ignorance was rational or good policy was left up to the Congress, which has the authority to allocate decisional authority between the agency and the courts. Whatever the virtues of such administrative ignorance, however, Congress clearly changed course with the Patent Act of 1836, which rebuilt the agency with the power and resources to become an expert on patent validity.¹⁸ Moreover, Congress has since then allocated progressively more and more resources and authority to the agency, with the most recent expansion coming in the 2011 America Invents Act (the "AIA").¹⁹ Any theory championing (or even apologizing for) administrative ignorance

^{15.} See infra Section III.A.

^{16.} Indeed, if such a calculation were to be made, the agency's allocation of resources for acquiring information might well be shown deficient. *See generally* Michael D. Frakes & Melissa F. Wasserman, *Irrational Ignorance at the Patent Office*, 72 VAND. L. REV. 975 (2019) (arguing that several of Professor Lemley's empirical assumptions are inaccurate in light of more recent data).

^{17.} EDWARD C. WALTERSCHEID, TO PROMOTE THE PROGRESS OF USEFUL ARTS: AMERICAN PATENT LAW AND ADMINISTRATION, 1798–1836, at 243 (1998) (describing the period from 1793 to 1836 as "[t]he era of registration" in patent administration).

^{18.} See Patent Act of 1836, ch. 357, §§ 1–2, 5 Stat. 117, 117–18 (establishing the Patent Office and the office of Commissioner of Patents and authorizing the hiring of technical staff); *id.* § 19, 5 Stat. at 125 (appropriating money for building "a library of scientific works and periodical publications, both foreign and American, calculated to facilitate the discharge of the duties" of the new Patent Office).

^{19.} See generally Leahy–Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011) (granting the Patent Office substantially increased authority in evaluating patent claims).

goes against more than a century and a half of democratically enacted policy codified in statutory law.

Despite these fundamental problems (as well as additional flaws discussed in Section II.B), the rational ignorance theory gained prominence. In hindsight, the theory's success seems to have been a product of the times. Professor Lemley published his article on rational ignorance in 2001.²⁰ Just two years earlier, near the end of the Clinton Administration, the Patent Office began describing the "primary mission" of its "Patent Business" as being "to help customers get patents.²¹ The agency continued to adhere to that "help customers" position through 2000 and 2001.²² In that era, the rational ignorance theory was perfectly attuned to the agency's approach to patent law. It provided intellectual cover for an agency that viewed patent applicants as "customers"; made it a "goal" of the agency "to improve customer satisfaction levels"; and cultivated a "staff who genuinely are interested in, and capable of, supporting and helping our customers get patents.²³

Times change, however. The agency's "help customers" stance was roundly criticized and then abandoned in 2002, just a year after publication of the *Rational Ignorance* article.²⁴ In 2007, the agency successfully sought from

22. U.S. PATENT & TRADEMARK OFFICE, FY 2002 CORPORATE PLAN, reprinted in Dep'ts of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations for 2002: Hearings Before a Subcomm. of the H. Comm. on Appropriations, 107th Cong. 1267 (2001) ("The mission of the Patents Business is to help customers get patents."); U.S. PATENT & TRADEMARK OFFICE, FY 2001 CORPORATE PLAN, reprinted in Dep'ts of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations for 2001: Hearings Before a Subcomm. of the H. Comm. on Appropriations, 106th Cong. 1391 (2000).

23. U.S. PATENT & TRADEMARK OFFICE, FY 2000 CORPORATE PLAN, reprinted in Dep'ts of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations for 2000: Hearings Before a Subcomm. of the H. Comm. on Appropriations, 106th Cong. 1289 (1999).

21. See U.S. PATENT & TRADEMARK OFFICE, FY 2002 CORPORATE PLAN, reprinted in Dep'ts of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations for 2002: Hearings Before a Subcomm. of the H. Comm. on Appropriations, 107th Cong. 1280 (2001) (stating that the agency's mission is to "balance between the public's interest in intellectual property and each customer's interest in his/her patent and trademark"). For contemporaneous criticism of the agency's position, see, for example, Brian Kahin, The Expansion of the Patent System: Politics and Political Economy, FIRST MONDAY (Jan. 8, 2001), https://journals.uic.edu/ojs/index.php/fm/article/ view/828/737 (noting the difference between the agency's mission statement for its "Trademark Business," which was merely "to apply the provisions of the Trademark Act of 1946 in the examination and registration of trademarks" (quoting Departments of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations for 2002: Hearing before a Subcomm. of the H. Comm. on Appropriations, 107th Cong. 17 (2001))) and remarking that the agency's "formulation of the patent business mission testifies to the agency's capture by its customers-those to whom it grants monopoly rights on an ex parte basis." See also FEDERAL TRADE COMMISSION, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY ch. 6, at 21 n.125 (2003) (quoting testimony disclosing that the Patent Office's own Patent Public Advisory Committee criticized the agency's 2000 mission statement as "inappropriate with regard to the

^{20.} See generally Lemley, supra note 11 (discussing rational ignorance in a patent context).

^{21.} U.S. PATENT & TRADEMARK OFFICE, FY 2000 CORPORATE PLAN, reprinted in Dep'ts of Commerce, Justice, and State, the Judiciary, and Related Agencies Appropriations for 2000: Hearings Before a Subcomm. of the H. Comm. on Appropriations, 106th Cong. 1275 (1999).

the Supreme Court a more demanding interpretation of the statutory patentability standard that gave the agency more power to reject patent applications.²⁵ More importantly, the agency in 2011 sought and obtained from Congress vastly expanded administrative powers that shifted a significant amount of authority on patent validity issues from the courts to the agency.²⁶ Those new powers gave the agency significantly greater ability to confront and to correct its own mistakes in issuing patents and created processes designed to bring more, not less, information and expertise into the Patent Office.

While the changes in the last decade and a half have made untenable a rational ignorance approach within the Patent Office, a successor theory has yet to be identified in the academic literature. This Essay seeks to fill that gap by championing the concept of "reasoned decisionmaking" as a superior guide for the agency in running its patent processes. The groundwork for this change is already being set. In the past few years, the Federal Circuit has increasingly cited the concept of "reasoned decisionmaking" in reviewing post-AIA decisions of the agency.²⁷ During this period, the court's decision in *In re Lee* has enjoyed a renaissance, with the Court of Appeals citing the case not for its inartful language on common sense, but for its application of reasoned decisionmaking to the agency.²⁸

26. See Leahy–Smith America Invents Acts, Pub. L. No. 112-29, §§ 6, 18, 125 Stat. 284, 299 -311, 329–31 (granting to the agency broader powers to review the validity of issued patents and to formulate rules governing such procedures); see also infra Section III.C.

27. *See, e.g.*, Aqua Prods., Inc. v. Matal, 872 F.3d 1290, 1325 (Fed. Cir. 2017) (en banc) (plurality) (discussing the PTAB's "reasoned decisionmaking"); Outdry Techs. Corp. v. Geox S.P.A., 859 F.3d 1364, 1370 (Fed. Cir. 2017) (applying the concept of "reasoned decisionmaking" while reviewing the agency's final decision in an *inter partes* review proceeding).

public interest" (quoting Ronald Myrick)). Even after the agency's changed its mission statement, commentators continued to savage the "help customers" approach of the 1999–2001 era. *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 109 (2004) (criticizing the "help customers" approach as being "a far cry from the office's traditional credo, which had been 'to issue valid patents'"); Clarisa Long, *The PTO and the Market for Influence in Patent Law*, 157 U. PA. L. REV. 1965, 1995 (2009) (criticizing the approach as "undercutting the traditional adversarial relationship that the PTO is supposed to have with patent applicants").

^{25.} See KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 415–22 (2007) (rejecting on multiple grounds prior Federal Circuit precedent on the nonobviousness standard of patentability); see also Brief for the United States as Amicus Curiae Supporting Petitioner at 10, KSR Int'l Co., 550 U.S. 398 (No. 04-1350) (arguing that the Court should overturn then-existing Federal Circuit precedent which "exacts a heavy cost in the form of unwarranted extension of patent protection to obvious subject matter").

^{28.} See, e.g., In re Van Os, 844 F.3d 1359, 1362 (Fed. Cir. 2017) (quoting In re Lee, 277 F.3d 1388, 1346 (Fed. Cir. 2002) for the proposition that the agency must engage in "reasoned decisionmaking" and reversing and remanding the agency's rejection of claims in a patent application); see also Power Integrations, Inc. v. Lee, 797 F.3d 1318, 1323 (Fed. Cir. 2015) (citing Supreme Court precedent requiring reasoned decisionmaking and then citing Lee for the corollary that an agency "is obligated not only to come to a sound decision, but to fully and particularly set out the bases upon which it reached that decision").

The trend toward reasoned decisionmaking is likely both to continue and to bring enormously important changes to patent administration in the coming years. The significance of such changes flows from one of the greatest advantages of using reasoned decisionmaking to guide the Patent Office: Reasoned decisionmaking is a comprehensive principle. It provides guidance for determining not only how much information the Patent Office should try to collect but also how the agency should approach its responsibilities more generally.

A single example is illustrative. While both the champions and critics of rational ignorance theory have generally debated whether the Patent Office should devote more time and resources to patent examination so that the agency can be more knowledgeable in issuing patents,²⁹ little attention has been devoted to the predicate question of what circumstances lead to ignorance at the agency in the first place. Given that the agency already imposes a duty of candor requiring applicants to disclose all "information material to [the] patentability" of their claimed inventions,³⁰ the agency will be substantially ignorant of such information only in cases where the patent applicants themselves are ignorant. Unfortunately, the empirical evidence demonstrates that cases of ignorance is really a debate about how the agency should respond to the problem of many filings by ignorant applicants. Throwing more money at that problem may not be the optimal solution.

As discussed more fully in Part IV below, reasoned decisionmaking suggests several ways in which the agency can rationally respond to the problem of ignorant applicants without the agency either spending more to amass greater knowledge or issuing unreliable patents. But the overarching lesson is that the generality of the reasoned decisionmaking principle invites both a more comprehensive inquiry into the basis of administrative problems and a more comprehensive search for possible solutions.

II. THE FOUNDATIONS OF REASONED DECISIONMAKING AND RATIONAL IGNORANCE

The case favoring reasoned decisionmaking as a polestar for the Patent Office—and rejecting rational ignorance—is best begun with an origin story for each of the two concepts. As discussed in Section II.A, the concept of

^{29.} *See* Frakes & Wasserman, *supra* note 16, at 989 (assuming that "the resolution of this debate [on rational ignorance] ultimately rests on an empirical evaluation of the costs and benefits of investing more in ex ante examination review").

^{30.} See 37 C.F.R. § 1.56 (2018) (imposing duty of candor); *id.* §§ 1.97–1.98 (setting forth requirements for the "information disclosure" statements that applicant file to comply with the duty of candor).

^{31.} Bhaven N. Sampat, *When Do Applicants Search for Prior Art?*, 53 J.L. & Econ. 399, 401 (2010) (finding that "on average, the majority of citations to previous patents come from examiners rather than applicants").

reasoned decisionmaking has clear foundations in administrative law. The phrase comes directly from Supreme Court precedent interpreting the statutory requirements of the APA, which are generally applicable to all administrative agencies, including the Patent Office.³² Moreover, the concept has deep roots in the theoretical underpinnings of modern administrative law.

By contrast, rational ignorance has virtually no basis in law. The phrase has never been used by the Supreme Court and has been used in only three federal appellate opinions, all within the last 25 years.³³ None of those opinions assert that the phrase embodies any legal requirement. Rational ignorance does have a specific use in the academic literature that coined the term,³⁴ but that meaning does not apply the problems facing the Patent Office. Moreover, even if the concept is broadened by analogy to encompass meanings similar to the phrase's specific use in the literature responsible for naming the concept, the phrase would better describe not the Patent Office's mission but instead the very problem that the agency was built to solve.

A. REASONED DECISIONMAKING AS A GENERAL ASPIRATION OF ADMINISTRATIVE LAW

The requirement that agencies must engage in reasoned decisionmaking is one of the central tenets of modern administrative law. The requirement has broad support among all the Justices of the Supreme Court.³⁵ That unanimity of support is well justified, for the concept harks back to the foundational principles of the administrative state.

The specific phrase "reasoned decisionmaking" first appeared in Supreme Court opinions in the Court's 1982 term. The first case to use the

34. See generally Lemley, supra note 11 (discussing rational ignorance in the patent context).

35. See Judulang v. Holder, 565 U.S. 42, 53 (2011) (9-0 decision) (holding that courts must "ensur[e] that agencies have engaged in reasoned decisionmaking"). Collectively, in subsequent cases, each Justice serving at the time of this Essay appeared in the majority. See FERC v. Elec. Power Supply Ass'n, 136 S. Ct. 760, 784 (2016) (describing the role of the courts in reviewing agencies as being "to ensure that the [agency] engaged in reasoned decisionmaking—that it weighed competing views, selected a [solution] with adequate support in the record, and intelligibly explained the reasons for making that choice"); Michigan v. EPA, 135 S. Ct. 2699, 2706 (2015) (beginning legal analysis with the proposition that "[f]ederal administrative agencies are required to engage in 'reasoned decisionmaking'" (quoting Allentown Mack Sales & Serv., Inc. v. NLRB, 522 U.S. 359, 374 (1998))).

^{32.} See Dickinson v. Zurko, 527 U.S. 150, 152 (1999) (holding that the Patent Office was subject to the judicial review provisions of the APA).

^{33.} The phrase was first used in a 1995 opinion by Judge Easterbrook. *See* Marusic Liquors, Inc. v. Daley, 55 F.3d 258, 262 (7th Cir. 1995). In that opinion, Judge Easterbrook used the phrase in its proper sense denoting the "rational ignorance" of voters in democratic elections who "do not invest heavily in information" because "no single person's vote affects the outcome." *Id.* The other two mentions were in opinions from the Federal Circuit (one a dissent) that were merely citing the article by Professor Lemley. *See* Hyatt v. Doll, 576 F.3d 1246, 1289 (Fed. Cir. 2009) (Moore, J., dissenting), *reh'g en banc granted, opinion vacated sub nom.* Hyatt v. Kappos, 366 F. App'x 170 (Fed. Cir. 2010); Figueroa v. United States, 466 F.3d 1023, 1033 n.15 (Fed. Cir. 2006) (citing the Lemley article in a footnote).

term—*Larkin v. Grendel's Den, Inc.*³⁶—was not an administrative law case. Rather, the case presented a First Amendment and Due Process Clause challenge to a Massachusetts statute allowing any church to veto applications for liquor licenses within 500 feet of the church.³⁷ In holding the statute unconstitutional, the Court identified the key flaw in the legislation as permitting "the unilateral and absolute power of a church" to be substituted "for the *reasoned decisionmaking* of a public legislative body acting on evidence and guided by standards."³⁸

The Court in Grendel's Den expressed only the more general sentiment that all public bodies, even legislative bodies, are ideally supposed to behave in a reasoned fashion.³⁹ The true advent of the phrase in the canon of administrative law occurred later in the Court's 1982 term, with two cases decided in June of 1983—first, Baltimore Gas & Electric Co. v. National Resources Defense Council, Inc.40 and then a few weeks later, Motor Vehicle Manufacturers Ass'n. v. State Farm Mutual Automobile Insurance Co.41 The latter case is one of the most famous in administrative law and has been repeatedly cited by both liberal and conservative Justices, as well as by the lower courts, to support the proposition agencies generally must engage in that "reasoned decisionmaking" in discharging their responsibilities.42 Indeed, the D.C.

- 38. *Id.* at 127 (emphasis added).
- 39. Id.

41. Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 52 (1983). Indeed, though *Grendel's Den* was decided before both *Baltimore Gas* and *State Farm*, it seems more likely that the litigation in the later cases influenced *Grendel's Den* rather than the other way around. The phrase "reasoned decisionmaking" did not appear anywhere in the briefing of the *Grendel's Den* case. (A Westlaw search of the filings is available at https://1.next.westlaw.com/ RelatedInformation/Id4bb4e659c1d11d9g1docc6b54f12d4d/riFilings.html). At the same time, the concept of "reasoned decisionmaking" was already being commonly deployed at the D.C. Circuit in administrative law cases, including in opinions issued in connection with both lower court judgments reviewed in *Baltimore Gas* and *State Farm. See, e.g.*, Nat. Res. Def. Council, Inc. v. U.S. Nuclear Regulatory Comm'n, 685 F.2d 459, 537–40 (D.C. Cir. 1982) (Wilkey, J., dissenting) (devoting an entire section of the dissent to the requirement of "reasoned decisionmaking"), *rev'd sub nom. Balt. Gas*, 462 U.S. 87; State Farm Mut. Auto. Ins. Co. v. Dep't of Transp., 680 F.2d 206, 209 (D.C. Cir. 1982) (describing "reasoned decisionmaking" to be "the essence of lawful administrative action"), *vacated sub nom. State Farm*, 463 U.S. 29.

42. See, e.g., Judulang v. Holder, 565 U.S. 42, 53 (2011) (Kagan, J., for the Court) (relying on *State Farm* in describing the Courts' role "in ensuring that agencies have engaged in reasoned decisionmaking"); Allentown Mack Sales & Serv., Inc. v. NLRB, 522 U.S. 359, 374 (1998) (Scalia, J., for the Court) (stating that the Administrative Procedure Act "establishes a scheme of 'reasoned decisionmaking'" (quoting *State Farm*, 463 U.S. at 52)); Global Tel*Link v. FCC, 866 F.3d 397, 408 (D.C. Cir. 2017) (adhering to the reasoning of *State Farm*).

^{36.} Larkin v. Grendel's Den, Inc., 459 U.S. 116, 127 (1982).

^{37.} See id. at 117 (summarizing issues presented in the case).

^{40.} Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. 87, 105 (1983).

Circuit has for decades repeatedly described the "reasoned decisionmaking" requirement as a "fundamental" principle of administrative law.⁴³

Yet the "reasoned decisionmaking" requirement runs even deeper than the use of that exact phrase—the idea appears in decades' worth of Supreme Court and appellate opinions. Even before the Supreme Court ever used that phrase, the Court made clear that an administrative agency must supply a "reasoned basis" to justify its action;⁴⁴ that an agency must provide some degree of "clarity" in "disclos[ing] the basis" for its action;⁴⁵ and that the courts would review an agency only on "[t]he grounds . . . upon which the record discloses that its action was based."⁴⁶ Indeed, as the theory of modern administrative law was being built in the early 20th century, it was common to refer to the newly constituted agencies as administrative "tribunals."⁴⁷ Thus, early agencies were viewed as analogous to judicial bodies, and in the Anglo-American legal tradition, judges are supposed to "issue reasoned decisions" because "[t]he judicial system as a whole is designed to promote reason as the paramount judicial virtue."⁴⁸

The roots of reasoned decision-making can be traced even deeper still. Administrative law was developed as a means for subjecting governmental decisional processes to more rationality—to expertise and thoughtful resolution. That ideal had (and still has) two components. First, modern administrative agencies generally were designed as organizations that would concentrate expertise about a particular subject. They were designed as substitutes for less expert bodies, such as legislatures, in wielding the power to regulate.⁴⁹ At the time when modern administrative law was being built in the late 19th and early 20th centuries, Adolf Berle described agencies as bodies "whose duty it is to render expert service in some field calling for that service."⁵⁰ Berle and others used the Patent Office as an important example

^{43.} P.R. Higher Educ. Assistance Corp. v. Riley, 10 F.3d 847, 853 (D.C. Cir. 1993) (describing it as a "fundamental principle"); Celcom Commc'ns Corp. v. FCC, 789 F.2d 67, 71 (D.C. Cir. 1986) (describing the requirement as a "fundamental mandate").

^{44.} Bowman Transp., Inc. v. Ark.-Best Freight Sys., Inc., 419 U.S. 281, 285 (1974).

^{45.} Phelps Dodge Corp. v. NLRB, 313 U.S. 177, 197 (1941).

^{46.} SEC v. Chenery Corp., 318 U.S. 80, 87 (1943).

^{47.} See, e.g., Hill v. Wallace, 259 U.S. 44, 66 (1922) (describing an executive branch board consisting of the Secretary of Agriculture, the Secretary of Commerce, and the Attorney General as an "administrative tribunal"); Tex. & Pac. Ry. Co. v. Abilene Cotton Oil Co., 204 U.S. 426, 441 (1907) (referring to the federal Interstate Commerce Commission as an "administrative tribunal"); Louisville & Nashville R.R. Co. v. Kentucky, 183 U.S. 503, 515 (1902) (referring to a state regulatory agency as an "administrative tribunal").

^{48.} J. Harvie Wilkinson III, The Role of Reason in the Rule of Law, 56 U. CHI. L. REV. 779, 792 (1989).

^{49.} See, e.g., John A. Kurtz, State Public Service Commissions, in THE GROWTH OF AMERICAN ADMINISTRATIVE LAW 136, 139–40 (Ernst Freund et al. eds., 1923).

^{50.} A.A. Berle, Jr., *The Expansion of American Administrative Law*, 30 HARV. L. REV. 430, 439 -40 (1916).

of an administrative agency even though the Patent Office, with its system of expert examination, was created in the first half of the 19th century.⁵¹

Yet expertise alone is only part of the administrative ideal constructed by the early theorists in the field. The experts in an agency were also expected to deploy their knowledge in a reasoned manner. Thus, as Harvard Professor Bruce Wyman wrote in 1914, early judicial decisions reviewing agency orders demonstrated "that as a people we will not be content to have our rights determined by administrative fiat; we demand reasoned judgment based upon ascertained principles generally understood."52 Similarly, University of Chicago Professor Ernst Freund tied the principle of reasoned decisionmaking back to the very justification for legislative delegations of power to agencies. The theory underlying such delegations was that "where the data for an intelligent framing of rules are not available" for a purely legislative action, then delegation of powers to an administrative agency is justifiable "by the inherent superiority" of the administrative method.53 Paradoxically, that superiority was the very amenability of administrative processes to constraints: "Administrative action lends itself to qualification by safeguards which are incapable of being applied to direct legislation and which may be instrumental or essential in working out a policy of justice."54 Delegation of power to an agency made possible "the semi-judicial handling of legislative discretion" with a "reasoned decision" encompassing at least "the tentative laying down of something like a principle."55

To be sure, many of the early administrative law theorists would not have favored judicial review to force agencies to engage in reasoned decisionmaking. They might have well believed that the newly constructed agencies would produce reasoned decisions without any help from the courts.⁵⁶ That hostility to review is reflected even in Supreme Court opinions from the first half of the 20th century. In a 1931 opinion for the Court, Justice Brandeis asserted that "it [was] not [the Court's] province to enquire into the

^{51.} *Id.* at 445; *see also* FRANK J. GOODNOW, POLITICS AND ADMINISTRATION: A STUDY IN GOVERNMENT 119 (1900) (discussing the "enormous increase in the administrative work of the national government, much of which was of a semi-scientific character" and giving "the patent office administration" as one of the prime examples); O. Roscoe McGuire, *Federal Administrative Law*, 13 VA. L. REV. 461, 473–75 (1926) (surveying the avenues for judicial review of the Patent Office in a general discussion of judicial review of federal agencies).

^{52.} Bruce Wyman, Jurisdictional Limitations upon Commission Action, 27 HARV. L. REV. 545, 569 (1914).

^{53.} Ernst Freund, Prolegomena to a Science of Legislation, 13 ILL. L. REV. 264, 286-87 (1918).

^{54.} Id.

^{55.} Id. at 287.

^{56.} Berle, *supra* note 50, at 445-46 (setting forth as a major proposition of his article that "[a] special administrative body, to the extent of its jurisdiction, excludes the operation of the general machinery in its field" and making clear that a "special administrative" body should "exclude[] the courts from its field").

soundness of [an agency's] reasoning, the wisdom of its decisions, or the consistency of its conclusion with those reached in similar cases."⁵⁷

Such views changed, however, after Congress enacted the APA, with its broad authorization for courts to review agency actions and to set them aside if they were found to be "arbitrary [and] capricious."⁵⁸ Based on that statutory command, courts have found that they do have a role in ensuring the "soundness" of agency decisions;⁵⁹ that they should check the consistency of an agency's decisions with its own prior decisions;⁶⁰ and that generally they must engage in a "thorough, probing, in-depth review" of an agency's reasoning.⁶¹

B. THE ORIGINS AND MEANING OF "RATIONAL IGNORANCE"

The concept of "rational ignorance" can have either a broad meaning or a much more specific one. In the broad sense of the phrase, it is undeniably true that all rational economic actors are rationally ignorant, but it is equally true that they are rationally informed. In this sense, the phrase signifies nothing more than a rational approach to the accumulation of information and knowledge.

No one, not even someone who bears all the costs and benefits of a decision, spends infinitely on obtaining all possible information about the possible effects of the decision. To the extent they are rational, consumers, businesses, and government institutions obtain information up to the point where the marginal benefit of having the additional information just barely counterbalances the cost of obtaining the information. Spending more—in other words, striving to obtain information where the costs of the information outweigh its benefits—is not economically rational.

Thus, if the phrase "rational ignorance" is supplied its broad meaning, all rational economic actors are both rationally ignorant and rationally informed. If such a broad definition of rational ignorance is used, any claim that a particular rational actor or institution is, or should be, rationally ignorant is an utterly trivial point. Indeed, it is a mere tautology.

If a claim about "rational ignorance" is to have any significant force, the phrase must be limited to situations where actors have a reason to remain *especially* ignorant, over and above the more trivial point that all rational actors obtain information and knowledge only where the benefits of acquiring the

^{57.} Ga. Pub. Serv. Comm'n v. United States, 283 U.S. 765, 775 (1931).

^{58. 5} U.S.C. § 706(2)(A) (2012).

^{59.} See, e.g., Barnett v. Weinberger, 818 F.2d 953, 964 (D.C. Cir. 1987) (referring to the court's "obligation to ascertain the soundness of the disputed agency decision").

^{60.} Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 57 (1983) (endorsing the D.C. Circuit's so-called swerve doctrine, under which "an agency changing its course [from prior decisions] must supply a reasoned analysis" (quoting Greater Bos. Television Corp. v. FCC, 444 F.2d 841, 852 (D.C. Cir. 1970))).

^{61.} Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 415 (1971).

information are not outweighed by the costs. In fact, the history of the phrase "rational ignorance" supports that approach.

The phrase "rational ignorance" originated in Anthony Downs' 1957 article, *An Economic Theory of Political Action in a Democracy*, which studied a very specific type of ignorance—the ordinary voter's ignorance of political information in a large democracy.⁶² Such political ignorance results from the basic point that, in a large democracy with millions of voters, "the probability that any one citizen's vote will be decisive [in an election] is very small indeed"; "the return from voting 'correctly'"—i.e., consistent with one's rational interests—is "infinitesimal"; and therefore, "the incentive to become well informed is practically nonexistent."⁶³ Thus, the phrase "rational ignorance" as was originally coined referred to a very specific type of ignorance that stems from the fundamental collective action problem of voting in democracy.

As Downs noted, the "usual way" of remedying such a collective action problem is to create some sort of "central agency."⁶⁴ The classic example is the use of centralized forces to provide for national defense.⁶⁵ Downs rejected that solution as "not feasible" for remedying the rational ignorance of voters because, among other reasons, it would be "incompatible with the traditional view of democracy."⁶⁶

The origins of "rational ignorance" as a policy concept demonstrates an immediate and obvious objection to applying the concept to Patent Office functions: Far from being an institution that should remain rationally ignorant, the Patent Office is the very type of "central agency" that governments create to *solve* rational ignorance problems. It is easy to overlook this point because, in modern litigation, patent infringement defendants are frequently large, well-resourced corporations like Google, Microsoft, and Cisco. Yet even today, many patent defendants are small- to medium-sized businesses.⁶⁷ Moreover, when the Patent Office was first created in 1836, patent defendants were much more likely to be comparatively small entities if for no other reason than that large corporations would not come to dominate the U.S. economy until the late 19th century.

^{62.} Anthony Downs, *An Economic Theory of Political Action in a Democracy*, 65 J. POL. ECON. 135, 139 (1957) (introducing the concept of "rational ignorance").

^{63.} Id. at 146.

^{64.} Id. at 147.

^{65.} Id. at 148.

^{66.} *Id.* Downs specifically considered the possibility of a central agency that would "coerce" individuals to become informed. *Id.* He rejected that solution as "not feasible" both "because 'well-informedness' is hard to measure" and also "because the resulting interference in personal affairs would cause a loss of utility that would probably outweigh the gains to be had from a well-informed electorate." *Id.*

^{67.} See Colleen Chien, Startups and Patent Trolls, 17 STAN. TECH. L. REV. 461, 471 (2014) (estimating that at least 55% of defendants targeted by patent assertion entities have less than \$10 million in annual revenues).

If the concept of "rational ignorance" is to be applied anywhere in the patent system, it would be to small entities involved in patent litigation —entities who might well have insufficient incentives to develop good information about the validity of the patents that they are accused of infringing. In fact, as discussed in Part III below, rational ignorance among patent defendants was a real problem in the early history of the U.S. patent system, and the Patent Office was created precisely to address that problem. In sum, any suggestion that the Patent Office should follow a path of rational ignorance is exactly backwards. The Patent Office was created to solve a problem of rational ignorance.

Perhaps, however, the concept of rational ignorance can be broadened to a more general concept denoting situations in which any special reason, not merely a collective action problem, favors an actor maintaining a high degree of ignorance. That approach appears to be the way that Professor Lemley implicitly defines rational ignorance, with the special reason for ignorance at the Patent Office being that most issued patents are economically inconsequential.⁶⁸ Thus, the argument goes, the optimal level of resources devoted to acquiring information about validity at the patent application stage must be discounted by the (high) probability of ultimate patent worthlessness.

That analogical extension to the concept of "rational ignorance" is much different than the concept as it was originally conceived in the work of Anthony Downs. At least, however, it does not devalue the concept down to the tautology that all rational actors should be rationally ignorant (and also rationally informed) because such an approach to information acquisition is always implicit in the concept of rationality. Nevertheless, such an argument remains vulnerable to at least four more detailed objections, each of which raises doubts about whether the worthlessness of many patents actually justifies administrative ignorance in issuing patents.

The first problem is that the ultimate worthlessness of most patents justifies not institutional ignorance, but only temporal ignorance. An abundance of patents that are ultimately proven worthless in no way suggests that the Patent Office is generally less able to determine patent validity as compared to the judges and juries who decide patent validity issues outside of the agency. It instead suggests that patent validity determinations are best *delayed* because, in later time periods, many validity issues are rendered moot by the ultimate economic worthlessness of the technology. In short, the ultimate worthlessness of many patents supports not *administrative ignorance* but *administrative sloth*.

A second difficulty is that rational ignorance does not take into account the importance of patent reliability for investment. It may seem true that, if a

^{68.} Lemley, *supra* note 11, at 1497.

large percentage of patents—perhaps even 95%⁶⁹—are ultimately not valuable enough to bother being licensed or litigated, then few resources should be devoted initially to determining whether an applicant's claim to a patent is valid. Such a position would push in favor of a pure registration system, with patent validity determined much later in time—i.e., determined when and if other parties begin to infringe. (Such a position would, however, still be consistent with administrative rather than judicial determination of validity.) Yet if patented technologies need continued investment to bring the technology to market—if patents have any sort of "prospect" function of encouraging investments in further developing and commercializing patented technologies⁷⁰—the uncertainty associated with patent validity will dampen investment.

In other words, any theory supporting initial ignorance about patent validity assumes that information about patent validity is primarily valuable for potential competitors, who will exist only in that fraction of cases where the patented technology is successful and thus lucrative to copy. But if information about patent validity is valuable to potential investors too, then the case for initial ignorance is much weaker. Potential investors will value information about patent validity *before* they invest in the technology, and if investors themselves cannot distinguish between valuable and worthless technologies ex ante, they will need to obtain information about validity for all patents in which they are considering investments.⁷¹

A third problem is that the rational ignorance thesis seems oblivious to the unique economics of information and knowledge. In particular, it fails to account for the reusability of knowledge. Even assuming the majority of patents are worthless, in every field *some* patents are commercially valuable, often extremely so. If the Patent Office is going to evaluate those patents

^{69.} *Id.* at 1511. In his *Rational Ignorance* article, Professor Lemley estimated that "the total number of patents litigated or licensed for a royalty" was "on the order of five percent of issued patents." *Id.* at 1507. That estimate might be low, but both his article and other research have demonstrated that a majority of patents expire before running their full term due to failure to pay relatively modest maintenance fees of a few thousand dollars. *See id.* at 1504 (setting forth data demonstrating that after 16–17 years only about 36% of patents have had the necessary maintenance fees paid to keep the patents from expiring early); Kimberly A. Moore, *Worthless Patents*, 20 BERKELEY TECH. L.J. 1521, 1525–26 (2005) (finding 53.71% of issued U.S. patents expire early).

^{70.} See Edmund W. Kitch, The Nature and Function of the Patent System, 20 J.L. & ECON. 265, 267 (1977) (explaining the patent system's role as a "prospect system"); see also John F. Duffy, Rethinking the Prospect Theory of Patents, 71 U. CHI. L. REV. 439, 445 (2004) (explaining that the prospect features of the patent system maximize the social value of inventions by fostering competitive races to invent that effectively award rights to the competitor willing to dedicate the innovation to the public domain at the earliest time).

^{71.} See Arti K. Rai, A Multi-Institutional Approach to Patent System Reform, 103 COLUM. L. REV. 1035, 1083 (2003) (noting that, if the Patent Office's decisions to issue patents are unreliable, then venture capitalists will have to spend resources on discerning the good from the bad or else "firms with legitimate patents may be tarred with the same brush as those with ill").

carefully, then the Patent Office as an institution is going to need to be knowledgeable in each technological field. Although that knowledge may be costly to obtain, it can be reused to evaluate other applications in the field. Indeed, in a complete analysis of the relative advantages and disadvantages of administrative versus judicial evaluation of patent validity, the ability of examiners to recycle their accumulated technical and legal expertise across many patent applications is a significant counterweight to the advantage of courts in having to evaluate only the fraction of commercially valuable patents. Even in courts with very active patent dockets, judges and certainly jurors rarely adjudicate the validity of multiple patents in the same technological field; they have to learn the field from the ground up in each case.

A fourth and final reason to doubt the wisdom of a rational ignorance approach is that, if the Patent Office does not impose some substantial check on claims to patent rights, many patent applicants could likely expand their claims to encompass a scope that will have significant commercial value. Patent applicants are supposed to limit their claims to what is novel and nonobvious, but such limitations can be enforced only with both significant knowledge about the prior art and sophisticated legal reasoning about the statutory standards for patent validity. This point—the necessity of active and substantial policing of patent claims by the Patent Office—is especially evident in the history of the Patent Office, not only in its foundation in 1836 but in the continued expansion of its powers throughout the past 183 years. To that history, we now turn.

III. THE HISTORICAL TREND TOWARD A MORE KNOWLEDGEABLE AND POWERFUL PATENT OFFICE

In enacting its first patent law in 1790, the United States undertook an experiment: The very first section of the statute provided that all applications for patents were to be examined administratively by a board of three high governmental officers—the Secretary of State, the Secretary of War, and the Attorney General.⁷² Patents could be issued only if a majority of those three officials "deem[ed] the invention or discovery sufficiently useful and important" to merit exclusive rights.⁷³ In establishing a system of initial examination, the young Republic rejected the approach of England, which required merely the registration of patents.⁷⁴ Instead, the new country initially followed France, an important early ally of the United States, which at the time required pre-issuance examination of claims to patent rights.⁷⁵ The U.S.

75. See id.

^{72.} See An Act to Promote the Progress of Useful Arts, ch. 7, § 1, 1 Stat. 109, 109–10 (1790).

^{73.} Id. at 110.

^{74.} Frank D. Prager, Examination of Inventions from the Middle Ages to 1836, 46 J. PAT. OFF. SOCY 268, 289 (1964).

approach was also somewhat innovative: U.S. law vested examination with a body of high-ranking, full-time government officials, whereas France relied on a quasi-governmental academic body, the French Royal Academy of Science.⁷⁶

That initial U.S. experiment with examination was, however, a failure. Within three years, Congress eliminated administrative review by the threeperson board of governmental officials; lodged the power "to cause letters patent to be made out in the name of the United States" exclusively with the Secretary of State; and eliminated any explicit language requiring officials to consider the merits of the invention.⁷⁷ The reason for the change, as explained later by Thomas Jefferson (who was Secretary of State in 1793), was that an "abundance" of patent applications "occupi[ed] more time of the members of the board than they could spare from higher duties," and so "the whole was turned over to the judiciary."⁷⁸

The 1793 statute began a 43-year period in which the United States followed the registration tradition of English law.⁷⁹ That period was truly a time of administrative ignorance, but as time passed, it was also an increasingly unsatisfactory period in American patent law. From that period through to the present, the United States has steadily and consistently rebelled against administrative ignorance. Beginning in 1836, the country has directed ever more resources and legal authority toward the Patent Office and simultaneously restricted judicial authority.⁸⁰

^{76.} *Id.* at 282–86 (setting forth the history leading up to the 1699 French statute that authorized the Academy to examine claims for patent rights).

^{77.} Act of Feb. 21, 1793, 1 Stat. 318, 320. Curiously, both the 1790 and 1793 Patent Acts included provisions requiring patent applications preliminarily approved by, respectively, the three-person board or the Secretary of State, to "be delivered to the Attorney General of the United States to be examined." *Id.* at 110; *see also id.* at 321. Both statutes required the Attorney General to determine whether the draft patent was "conformable" to the Patent Act and to certify if found to be so. *Id.* at 110; *see also id.* at 321. That requirement could possibly have been relied upon by the Attorney General to create a system of administrative examination. Indeed, the statutory language directed to the Attorney General in both statutes was the first time that Congress ever expressly required patent applications to be "examined" by a governmental official. *Id.* at 110; *see also id.* at 321. Nonetheless, for whatever reason, no Attorney General in the early Republic ever seized on this language to create an examination system of the sort later authorized by statute.

^{78.} Letter from Thomas Jefferson to Isaac McPherson (Aug. 13, 1813), available at https://founders.archives.gov/documents/Jefferson/03-06-02-0322 (last visited May, 25, 2019).

^{79.} *See id.* (noting that, with respect to the power to determine the validity of claims to patent rights, "England had given it to her judges, and the usual predominancy of her examples carried it to ours").

^{80.} See infra Sections III.B-.C (detailing the statutory and case law changes that have aggrandized the agency's power since 1836).

A. THE REGISTRATION PERIOD AND ITS DISCONTENTS

The registration system set up by the 1793 Patent Act meant that the federal courts were the only governmental entities authorized to pass on the validity of claims to patent rights.⁸¹ Such a registration approach has its theoretical advantages. First of all, it dramatically economizes on administrative costs by eliminating any expenditures on pre-issuance governmental determinations of patent validity. Second, it provides a reasonably efficient public ledger of *claims* to patent rights, so parties seeking to determine whether any other party has a claim against a particular technology can look to the ledger for guidance. Third, registration can be very rapid, so parties seeking to know whether someone else has a claim of exclusive rights do not have to worry much about the possibility of so-called "submarine patents" (patent applications that have been filed but have not yet matured into issued patents). Fourth and finally, a registration system eliminates the possibility of disagreement between the executive and judicial branches, which can breed uncertainty. Instead, all eyes are on the courts.

In theory, a registration system can work very well if—and this is a big if —judicial judgments on patent validity are (1) reasonably accurate; (2) reasonably predictable; and (3) reasonably inexpensive. If those three conditions hold, parties would not bother registering invalid claims to patent rights because other parties would expect the courts to invalidate such claims. Indeed, invalid patents could not be used to extract substantial settlements from defendants because litigating an invalidity defense to judgment is assumed to be inexpensive.

The difficulty with a registration system is, however, that all three conditions are not likely to be true, and in the early Republic, it is not clear that any were true. Early dissatisfaction with the registration system began to be voiced by an unlikely source—former President Thomas Jefferson, who is widely thought to have significantly influenced the drafting of the 1793 Patent Act when he was Secretary of State.⁸²

In 1813, Jefferson explained that, under the then-existing registration approach, a patent could not be refused "in the first instance, as the board was authorised to do," but instead "now issues of course, subject to be declared void on such principles as should be established by the courts of law."⁸³ Yet Jefferson believed that courts were ill suited for deciding patent validity. The relevant issues were "but little analogous to [the courts'] course of reading, since we might in vain turn over all the lubberly volumes of the law to find a single ray which would lighten the path of the Mechanic or the

^{81.} WALTERSCHEID, *supra* note 17, at 355 (noting that, during the registration era, "it was recognized almost immediately that a registration system placed the burden of determining patent issues on the courts").

^{82.} *Id.* at 196.

^{83.} Letter from Thomas Jefferson to Isaac McPherson, *supra* note 78.

Mathematician.⁷⁸⁴ Jefferson thought that "a board of Academical professors" would have better "information" to evaluate validity, and in addition, "a previous refusal of patent would better guard our citizens against harassment by lawsuits.⁷⁸⁵

Jefferson's concern about "harassment by lawsuits" was prophetic. For the next two decades, more voices would join in the chorus decrying a perceived prevalence of paltry patents. In 1817, a group of citizens from Pennsylvania petitioned Congress seeking some relief from "the many and great impositions to which they are subjected, in consequence of the number of unjust, absurd, and frivolous patents, which have been granted to a set of speculators, and praying that additional restrictions may be imposed on the issuing of patents."⁸⁶ In 1826, Judge Van Ness of the federal Circuit Court for the Southern District of New York complained that the "very alarming facility with which patents are procured" caused "[i]nterfering patents [to be] constantly presented" to the court, patentees to be "everywhere in conflict," and "controversy . . . [to be] sown in every quarter of the country."⁸⁷ In 1830, a proposal was made to raise the fee to obtain a patent because the registration system was permitting unscrupulous persons to obtain patents on articles "of common and daily use."⁸⁸

In sum, the courts seemed unable to quickly and easily winnow the valid from the invalid. That failure was fully the responsibility of the courts, because the Executive Branch's issuance of the patent itself was afforded little or no weight by the courts. Indeed, during the registration era in American patent law, courts varied even as to whether patentees or defendants in infringement suits bore the burden of proof on validity issues.⁸⁹ At most, an issued patent was a weak tie breaker—merely prima facie evidence of the patentee's entitlement to rights. Willard Phillips—the leading American patent treatise writer in the early 19th century—concluded that the weight given to the patent was "not a matter of great practical importance" because, even if the patent received no weight, the patentee could "doubtless" and "easily" obtain prima facie evidence from other sources to support the validity of "any patent for which any possible pretense could be made out."⁹⁰ In this era, the

89. See WILLARD PHILLIPS, THE LAW OF PATENTS FOR INVENTIONS 405-08 (1837). Phillips cited a circuit court opinion by Justice Story suggesting that an issued patent was, at least in some circumstances, prima facie evidence that the patentee was an inventor entitled to the issued patent rights. *Id.* at 405-06 (citing Stearns v. Barrett, 22 F. Cas. 1175, 1182 (C.C.D. Mass. 1816) (No. 13,337)). But he also noted that circuit court authority by Justice Washington and English precedent from Lord Justice Buller suggested that the patentee must prove validity without any presumption. *Id.* at 405-07.

^{84.} Id.

^{85.} Id.

^{86. 14} ANNALS OF CONG. 843 (1817).

^{87.} Thompson v. Haight, 23 F. Cas. 1040, 1041 (C.C.S.D.N.Y. 1826) (No. 13,957).

^{88. 6} Reg. Deb. 379-80 (1830).

^{90.} Id. at 406.

Executive Branch truly did remain ignorant of patent validity; the courts were fully in control of sorting the good from the bad claims to patent rights; and the system was not working well.

B. EXAMINATION AND THE ACCRETION OF ADMINISTRATIVE POWER: 1836-1952

In 1836, Congress responded to the outcry about bad patents by rejecting administrative ignorance.⁹¹ The key report on the legislation was written by Senator John Ruggles, who chaired a Senate select committee to study the patent system and who was also himself an inventor.⁹² The report issued by Ruggles's committee found that the registration system's administrative ignorance was not working out well for anyone. For non-patentees—i.e., most of the general public—the system meant threats of "expensive lawsuits" that often led to "unjust and iniquitous" payments to the holders of questionable patents.⁹³ For deserving inventors, the system also did not work because patents were "so much depreciated in general estimation that they are of but little value."⁹⁴ In sum, the registration system had proven itself to be an ineffective property rights system that created substantial litigation but provided certainty to no one.

The root problem was that, under the registration system, "[a] considerable portion of all the patents granted are worthless and void, as conflicting with, and infringing upon one another, or upon, public rights not subject to patent privileges."⁹⁵ The Ruggles Report therefore proposed legislation to create a Patent Office that would have both the resources to investigate the validity of patents and the legal authority to reject unmeritorious patent applications.⁹⁶

The proposal in the Ruggles Report quickly became the 1836 Patent Act, which is the foundation of the patent examination system in the United

94. Id. at 3-4.

95. Id. at 3.

^{91.} See Patent Act of 1836, ch. 357, 5 Stat. 117.

^{92.} See U.S. Patent No. 1 (filed July 13, 1836) (issuing to John Ruggles of Thomaston, Maine). It is perhaps a bit unseemly that Senator Ruggles received the first patent issued by the Patent Office using the administrative examination system authorized by the legislation he championed. Still, even though Ruggles must have been interested in obtaining patent rights while he was pushing the legislation in Congress, that legislation made obtaining patents *harder* than it was under the registration system. Thus, Ruggles's interest in starting the examination system shows that, even for patentees, the administrative ignorance that made patents easy to obtain had become intolerable.

^{93.} S. REP. NO. 338, 24th Cong., 1st Sess. 3-4 (1836) [hereinafter Ruggles Report].

^{96.} *Id.* at 4 (recognizing that, because the proposed legislation would impose "[t]he duty of examination and investigation" on the Patent Office, the legislation would have "to give to the Patent Office a new organization" ensuring "[t]he competency and efficiency of its officers should correspond with their responsibility, and with the nature and importance of the duties required of them").

States.⁹⁷ Yet that statute—important though it was—was only the beginning of the continuing reallocation of power concerning patent validity issues from the courts to the agency, and the shift occurred in all three branches of government. While Congress obviously started that process with the 1836 Act, the shifting of power continued over the next century as the courts themselves transferred to the agency power that the agency gladly received.

The doctrinal mechanism for the courts to shift power to the agency was the heightening of the burden imposed on parties challenging the validity of an issued patent. For example, in the 1874 case of *Coffin v. Ogden*, the Supreme Court held that "every reasonable doubt should be resolved against" the party challenging a patent because "[t]he law requires not conjecture, but certainty."9⁸ Before the end of the 19th century, the Court began relying on the Patent Office's statutory authority and expertise to justify the heightened burden that the caselaw was imposing on patent challengers.⁹⁹ By the time of the Court's 1934 decision in *Radio Corp. of America v. Radio Engineering Labs, Inc.*, the Court believed that any "infringer who assails the validity of a patent fair upon its face" should have to "bear[] a heavy burden of persuasion"—one "more than a dubious preponderance."¹⁰⁰ That shift in power was ultimately endorsed by Congress, which finally codified a statutory presumption of validity in the 1952 Patent Act.¹⁰¹

C. CANCELLATION OF ISSUED PATENTS: 1952-PRESENT

In addition to codifying the judicially created presumption of patent validity, the 1952 Patent Act also took another significant step. For the first time, the Patent Office was given the authority to invalidate a previously issued patent.¹⁰² To be sure, the 1952 statute granted that power only in the limited circumstance where an issued patent and a pending patent application were brought into a patent interference proceeding.¹⁰³ Still, that step was significant because the agency had never previously been given a power to cancel an issued patent.

^{97.} See WALTERSCHEID, supra note 17, at 426-27 (noting that, with some modifications, the bill accompanying the Ruggles Report quickly became the 1836 Patent Act and that the new statute authorized "the examination system that has remained a fundamental part of the patent law to this day").

^{98.} Coffin v. Ogden, 85 U.S. 120, 124 (1873).

^{99.} See Morgan v. Daniels, 153 U.S. 120, 124 (1894) (justifying a heightened burden on parties challenging the Patent Office's award of patent rights on the grounds that the agency was "a special tribunal, [en]trusted with full power in the premises").

^{100.} Radio Corp. of Am. v. Radio Engr. Labs., 293 U.S. 1, 8 (1934).

^{101.} Patent Act of 1952, § 282, 66 Stat. 792, 812 (codified as amended at 35 U.S.C. § 282(a) (2012)) (declaring that a "patent shall be presumed valid").

^{102.} *Id.* § 135, 66 Stat. at 802 (providing that a final judgment adverse to a patentee in any interference action "shall constitute cancellation of the claims . . . from the patent").

^{103.} Id. § 135, 66 Stat. at 801-02.

The 1952 Patent Act began a trend, which has continued into the 21st century, of Congress giving the Patent Office ever more power to reevaluate the validity of the previously issued patents. The expansions in the agency's power came in three major steps in 1980, 1999, and 2011. In 1980, Congress expanded the agency's power to cancel issued patents by creating a system of ex parte reexamination, which permits any person to request the agency reexamine the validity of an issued patent.¹⁰⁴ Though the party requesting review cannot thereafter participate in the reexamination proceeding,¹⁰⁵ the agency does have the power to cancel any claim in the issued patent subject to the reexamination procedure.¹⁰⁶ In 1999, Congress added an inter partes reexamination procedure, which broadened the agency's authority to cancel issued patents in adversarial proceedings beyond the narrow authority granted in the 1952 Act for canceling patent claims in interference proceedings.¹⁰⁷ And finally, through the AIA in 2011, the agency received even broader power to cancel issued patent claims through three new postissuance proceedings: (1) post-grant review; (2) review for covered business methods patents; and (3) inter partes review.¹⁰⁸

Given this historical trend, it is natural to think that Congress is not done—that Congress will continue granting the Patent Office more authority to review patent validity issues. But whatever the future brings, the past centuries have seen a consistent trend away from ignorance at the Patent Office. Two hundred years ago, there was true administrative ignorance, as patents were granted without any attempt to winnow the good claims from the bad. Yet precisely because that system was such a failure, Congress created a more knowledgeable agency and has ever since been expanding the agency's power. In sum, the statutory law enacted in 1836 was a move away from a true administrative ignorance approach, and the law has continued to move in that direction ever since.

IV. THE CONSEQUENCES OF CHOOSING REASONED DECISIONMAKING

Parts II and III of this Essay have demonstrated that, as a legal and historical matter, the concept of reasoned decisionmaking is a far more appropriate standard for guiding the Patent Office than rational ignorance. Indeed, as a matter of history, rational ignorance was much more the problem

^{104.} Pub. L. 96-517, \$ 301–307, 94 Stat. 3015, 3015–17 (1980) (codified as amended at 35 U.S.C. \$ 302–307 (2012)).

^{105. 35} U.S.C. § 305 (requiring that "reexamination will be conducted according to the procedures established for initial examination under" sections 132-133 of the Patent Act, which authorize only ex parte examination).

^{106.} See id. § 307.

^{107.} American Inventors Protection Act of 1999, Pub. L. No. 106-113, 113 Stat. 1501A–552, 1501A–567 to 1501A–570 (1999) (codified as amended at 35 U.S.C. §§ 311–318).

^{108.} Leahy–Smith America Invents Act, Pub. L. 112-29, §§ 6, 18, 125 Stat. 284, 299–311, 329–31 (2011) (codified at 35 U.S.C. §§ 311, 321).

that the Patent Office was built to solve, and the continuing expansions of the agency's power are best viewed as further attempts to give the Patent Office the powers necessary to address the rational and comparative ignorance of other institutional actors in the patent system.

This Part addresses some of the consequences of choosing reasoned decisionmaking as the agency's polestar. Section IV.A addresses the implications for the agency's traditional examination function. Section IV.B covers reasoned reforms for the agency's post-issuance processes created by the AIA.

A. REASONED DECISIONMAKING IN INITIAL EXAMINATION

As applied to the Patent Office's initial examination responsibilities, reasoned decisionmaking suggests that the agency's decisions must be reasonably informed, reasonably reasoned and reasonably reviewed.

1. Reasonably Informed

Reasoned decisionmaking does not necessarily demand that the Patent Office be highly informed in making its decisions. The Patent Office could quite reasonably decide that little or even no effort should be devoted to acquiring information on certain issues. For example, the agency devotes almost no effort in policing the statutory requirement that an invention be "useful." Indeed, the courts have also taken that approach. The theory underlying such an approach is that, as Justice Story said, the ultimate usefulness of an invention "is a circumstance very material to the interests of the patentee, but of no importance to the public."¹⁰⁹

The patent system's approach to utility could be loosely described as a true "rational ignorance" approach to the issue, with an important caveat. The approach to utility fosters not so much rational ignorance *at the Patent Office*, but rather rational ignorance *in the whole patent system*. The key reason that the patent system does not try to measure usefulness is that a decentralized marketplace itself provides good information about usefulness, with the market price revealing the degree to which ultimate consumers themselves value the invention as a useful improvement over prior technology. As Friedrich Hayek famously observed, one of the great benefits of free markets is their ability to aggregate information and then communicate that information through price.¹¹⁰ In contrast to voting, where decentralization creates informational problems, the decentralization of free markets creates an informational solution through the price mechanism. Thus, the patent system as a whole tends to remain ignorant about an invention's utility.

^{109.} Lowell v. Lewis, 15 F. Cas. 1018, 1019 (C.C.D. Mass. 1817) (No. 8,568) ("If it be not extensively useful, it will silently sink into contempt and disregard."), *abrogation recognized by In re* Fisher, 421 F.3d 1365 (Fed. Cir. 2005).

^{110.} F.A. Hayek, The Use of Knowledge in Society, 35 AM. ECON. REV. 519, 526 (1945).

Beyond the utility doctrine, however, are there other ways in which the Patent Office could economize on its needs for information? Three possibilities present themselves. First, as previously discussed, the central premise of the rational ignorance thesis—that most patents are eventually proven worthless—suggests not rational *ignorance* but rational *sloth*. If many patent applications cover innovations that are ultimately not commercially viable, the best course of action for the Patent Office may be inaction. The agency would register each application's priority date, but otherwise not be in any hurry to expend effort on it because the passage of time might moot the need for evaluating it. Such an approach is not far from current reality, as the agency maintains long examination for a fee.¹¹¹ As a response to the high rate of worthless patents, such a default rule of administrative sloth is more easily justified than administrative ignorance.

A second way in which the agency can economize on its need for information is to engage in a process of rational outsourcing. Again, the agency is already doing this to an extent. Most importantly, the agency curbs its own ignorance by imposing on applicants a duty of candor and by requiring them to file information disclosure statements to fulfill that duty.¹¹² Such regulatory requirements are, however, just a start toward a process of rational outsourcing.

Inventors often file patent applications covering the same invention in many countries, and the patent offices in those countries conduct their own prior art searches and examinations. Beginning in 2006, the Patent Office began a "Patent Prosecution Highway" ("PPH") program to rely on those foreign searches and examinations, but the program remains at the option of patent applicants and is tiny—covering only about 1% of patent application filings.¹¹³ That voluntary program could be dramatically expanded, and at least with respect to prior art searches, there is no legal reason why the Patent Office cannot mandate reliance on foreign searches. The statutory duty of the agency requires only that it "shall cause an examination to be made of the application and the alleged new invention."¹¹⁴ The statute does not require a prior art search. Of course, a prior art search may be an essential part of

^{111.} The current fee is 4,000, with discounts for small and micro entities. See 37 C.F.R. 1.17(c) (2018).

^{112.} Id. §§ 1.56, 1.97–1.98.

^{113.} In fiscal year 2018, PPH filings accounted for a mere 6,761 of 595,683 total filings (or 1.1%). *See* U.S. PATENT & TRADEMARK OFFICE, FY 2018 PERFORMANCE AND ACCOUNTABILITY REPORT 178 (2018) [hereinafter U.S. PATENT & TRADEMARK OFFICE, FY 2018], *available at* https://www.uspto.gov/sites/default/files/documents/USPTOFY18PAR.pdf (reporting 595,683 patent utility applications filed in fiscal year); *id.* at 89 (reporting 55,165 cumulative PPH filings from 2006 to the end of FY 2018); U.S. PATENT & TRADEMARK OFFICE, FY 17 PERFORMANCE AND ACCOUNTABILITY REPORT 82 (2017), *available at* https://www.uspto.gov/sites/default/files/documents/USPTOFY17PAR.pdf (reporting 48,404 cumulative filings at the end of FY2017).

^{114. 35} U.S.C. § 131 (2012).

conducting an examination *if no prior art search has previously been done*. But if such a search has been conducted and the results supplied to the Patent Office, there is no reason for the agency not to confine its activities to its statutory mandate, which expressly includes only examining, not searching.

Furthermore, if the Patent Office can lawfully rely on a European or Australian search of the technological prior art, then surely it could also rely on a privately conducted search. Currently, patent applicants generally have to pay separate fees (1) for filing the application; (2) for searching the prior art; and (3) for examining the application.¹¹⁵ The full general search fee is currently \$660, excluding any discounts for small and micro-entity applicants.¹¹⁶ Yet again there's no reason for the agency to search if the applicant has already done so. Thus, the patent office could waive the search fee if the applicant provided a prior art search report from an independent search firm that produces, on average, searches equal to, or better than, searches conducted by the agency's examiners.¹¹⁷

Perhaps some patent applicants would not prefer paying for an independent search to be done. Such applicants might view the Patent Office's \$660 search fee as a bargain. But many others might voluntarily choose to pay more for their own independent searches because such prior art searches can be helpful not merely to the Patent Office in its role of examining claims, but also to applicants in drafting initial claims that are appropriately restricted (and thus do not need to be subject to narrowing amendments that can trigger prosecution history estoppel). Patent applicants might also pay for independent searches of the prior art as a means of signaling to potential investors their confidence in the patentability of the

^{115.} See 37 C.F.R. § 1.16 (describing the fee schedule).

^{116.} See id. § 1.16(k).

^{117.} The ability of private parties to choose their own search firms might raise concerns of a "race to the bottom"-with patent applicants selecting the least competent search firm so as to increase the chances of getting a patent. It is not clear that most patent applicants would seek incompetent search firms, for knowledge of the prior art is valuable to patent applicants in drafting claims that are likely to be sustained as valid. Moreover, any concern about a race to the bottom can be addressed through a variety of mechanisms, including the ability of the Patent Office to decertify the firm as an acceptable search firm if the firm's searches prove unreliable. See Michael Abramowicz & John F. Duffy, Ending the Patenting Monopoly, 157 U. PA. L. REV. 1541, 1576-1601 (2009) (discussing legal mechanisms to prevent a "race to the bottom" in the analogous context of private patent examination firms). Another source of possible concern is that, because patent applications previously filed by others, i.e., prior art under 35 U.S.C. § 102(a)(2), would not be publicly disclosed until 18 months after the applicant's filing date, the independent search firm might have to delay its search for 18 months or to supplement any prefiling search after 18 months. Yet the Director has authority under 35 U.S.C. § 122(a) to release patent application information in "special circumstances" and would likely be able to use that power to authorize search firms to conduct confidential searches of the agency's database of recently filed applications. Alternatively, an applicant seeking to use a private search could delay examination and submit the results of the private search 18 months after its filing, which would only slightly delay the agency's current average of more than 15 months before its first office action on filed applications. See U.S. PATENT & TRADEMARK OFFICE, FY 2018, supra note 113, at 32.

technology. In sum, reasoned decisionmaking suggests that the agency should devote less of its own resources to acquiring information about the prior art where private parties have spent their own resources acquiring the same information.

Finally, as discussed in the introduction, the Patent Office could reduce its need for information by adopting a policy of rational antipathy toward ignorant applicants. Precisely because the Patent Office already requires applicants to disclose all of their own relevant knowledge about the field of invention, the agency will be substantially ignorant about the prior art only if the applicant, who claims to be an inventor, is also ignorant. But how often are good inventors substantially ignorant about their own fields? Perhaps sometimes a dilettante can produce an important insight, but if—as Isaac Newton believed—most great creators can see further only by "standing on [th]e sho[u]lders" of others,¹¹⁸ ignorant inventors should be the exception, not the rule.¹¹⁹

Reasoned decisionmaking would thus support the agency adopting a rational degree of skepticism toward applicants who are ignorant but nonetheless claim to be inventors. Existing case law provides a doctrinal vehicle for such a policy: The agency (and in infringement actions, the courts could use a patent applicant's ignorance as a "secondary too) consideration[]" of patent "obviousness" under the Supreme Court's seminal decision in Graham v. John Deere.120 Secondary considerations are usually thought to favor only patentability, but Graham clearly authorizes them to cut either way.¹²¹ Of course, they are only factors, not hard and fast rules. Yet ignorance on the part of the alleged inventor seems like a fair indicator of obviousness of the alleged invention, especially where the inventor's ignorance means that a new theory of nonobviousness must be manufactured after the filing of the application. Indeed, the reasoning in the Graham case itself supports this approach. The patentee in Graham had been ignorant of a key piece of prior art at the time his application was filed and thus had to come up with a brand new theory of his inventive contribution during

^{118.} Letter from Isaac Newton to Robert Hooke (Feb. 5, 1675) (image of original available at https://digitallibrary.hsp.org/index.php/Detail/objects/9792) (last visited May 25, 2019), *reprinted in* ROBERT K. MERTON, ON THE SHOULDERS OF GIANTS: A SHANDEAN POSTSCRIPT 31 (1965).

^{119.} Of course, some inventors break sharply with tradition, but even those inventors need not be ignorant. They are likely knowledgeable enough to appreciate that they are pursuing a unique path. *See, e.g.*, Michal Shur-Ofry, *Non-Linear Innovation*, 61 MCGILL LJ. 563, 565 (2016) (citing the example of Dan Shechtman, the 2011 Nobel Prize Winner in Chemistry, whose 1982 discovery of quasi-periodic crystals made him "the subject of contempt and ridicule" for many years prior to eventual scientific acceptance and acclaim).

^{120.} Graham v. John Deere Co. of Kan. City, 383 U.S. 1, 17–18 (1966).

^{121.} See id. (referring to "secondary considerations" as being "indicia of obviousness or nonobviousness").

litigation.¹²² The Court held that against him, finding it "strange" that the inventor's new theory of nonobviousness was not "hinted at in the specifications of the patent."¹²³ Such approaches rightly penalize ignorant patent applicants.

2. Reasonably Reasoned: Better Legal Reasoning

One of the greatest advantages of using reasoned decisionmaking in guiding the activities of the Patent Office is the comprehensiveness of the principle. It provides guidance not only for determining how much information the Patent Office should try to collect but also how the agency should approach its other responsibilities. Importantly, reasoned decisionmaking can be used in addressing the amount, content, and timing of the agency's legal reasoning.

Legal reasoning is obviously important to the proper functioning of any administrative agency, and no less so for the Patent Office. Even with perfect information, the Patent Office will issue a large number of invalid patents if it engages in faulty legal reasoning. High quality legal reasoning is thus a complement to good factual information—the two are worth more jointly than singly. For that very reason, the Patent Office should be careful to allocate sufficient resources to engage in high quality legal reasoning and to memorialize that reasoning.

The Patent Office appears deficient in this responsibility—failing even to require examiners to give clear reasons for allowing patents. Currently, the Patent Office rules maintain that, even where "the record of the prosecution as a whole does not make clear [the examiner's] reasons for allowing a claim or claims," the examiner "may"—not must—enter reasons to clarify the basis for allowance.¹²⁴ Moreover, even where examiners do include some reasons for allowance, the reasoning is often not especially thorough.

The Patent Office can help in remedying this deficiency, and it has at least considered taking steps in the right direction. Between 2015 and 2016, the Patent Office conducted a trial "Clarity of the Record" pilot project that tried to improve (among other things) the clarity of examiners' reasons for

^{122.} See id. at 26 (noting that a key piece of prior art—a product manufactured by the Glencoe Manufacturing Company—contained "all of the elements" disclosed in Graham's patent and also had an "identical" mechanical operation); *id.* at 25 (noting that Graham's theory of nonobviousness of his claimed invention was not "hinted at in the specifications of the patent" nor "raised in the Patent Office" (quoting Lincoln Eng'g Co. v. Stewart-Warner Corp., 303 U.S. 545, 550 (1938))); *see also* John F. Duffy & Robert P. Merges, *The Story of* Graham v. John Deere Company: *Patent Law's Evolving Standard of Creativity, in* INTELLECTUAL PROPERTY STORIES 109, 138–41 (Jane C. Ginsburg & Rochelle Cooper Dreyfuss eds., 2006) (describing in detail why the Glencoe prior art was fatal to Graham's claimed invention).

^{123.} Graham, 383 U.S. at 25 (quoting Lincoln Eng'g Co., 303 U.S. at 550).

^{124. 37} C.F.R. § 1.104(e) (2018).

allowance.¹²⁵ The agency, however, could do more. At the very least, the agency should amend its rules to provide that examiners *must*, not may, provide clarifying reasons for allowance where the prosecution record does not otherwise make clear those reasons. Indeed, it would be best if examiners simply made the reasons for allowance clear in a single document filed when the patent is deemed allowable.¹²⁶

The courts can also push the Patent Office toward improving its legal reasoning. Under current law, the presumption of validity carried by an issued patent in infringement litigation "may lose significant force" where "the [Patent Office] did not have all material facts before it."¹²⁷ The same principle should also apply where the agency engaged in faulty legal reasoning. If the courts took that approach, the weakening of the presumption of validity would give an incentive to patent applicants not only to make sure that the agency had the proper prior art, but also that the examiner did not grant the patent using incorrect legal grounds.

Good legal reasoning is not only a complement to good factual information. It can also be a substitute, to some extent, for somewhat imperfect information. One example of this point has already been made. Given the requirement that applicants must disclose relevant information during the application process, the Patent Office itself can be substantially ignorant of the prior art only if the patent applicant is too. A legal rule that makes the applicant's ignorance a secondary consideration against patentability would create an incentive for applicants to become better informed, which in turn will lead to a better-informed agency. Moreover, such a legal rule could also lead to better results, for even a relatively uninformed agency could rely on the inventor's ignorance (and hence the agency's own ignorance) as a justification for making broader inferences of obviousness based on the prior art that it does know. More applications filed by the ignorant will be rejected, but likely few meritorious inventions will be lost.

Of course, to apply such a rule, the Patent Office would need to distinguish ignorant patent applicants from knowledgeable ones, but that task may not require much effort or knowledge. For example, where an applicant does not disclose to the agency a significant number of relevant prior art references, the examiner could perhaps presume that the applicant is largely ignorant of the art or, alternatively, could conduct a quick search to

^{125.} See Michelle K. Lee, Enhanced Patent Quality Initiative: Moving Forward, U.S. PATENT & TRADEMARK OFFICE: DIRECTOR'S FORUM: A BLOG FROM USPTO'S LEADERSHIP (Nov. 6, 2015), https://www.uspto.gov/blog/director/entry/enhanced_patent_quality_initiative_moving (announcing project); see also Clarity of the Record Pilot, U.S. PATENT & TRADEMARK OFFICE, https://www.uspto.gov/patent/initiatives/clarity-record-pilot (last visited May 25, 2019) (noting that clarifying the record on the agency's reasons for allowance was one of four areas in which the agency would provide special training to its examiners as part of the project).

^{126.} The additional increment of work for examiners would not be great as the applicant's attorney could draft the proposed reasons for allowance.

^{127.} Microsoft Corp. v. i4i Ltd. P'ship, 564 U.S. 91, 111 (2011).

determine whether the applicant is correct that there is very little relevant prior art. In many cases, the applicant's ignorance could be demonstrated even if the agency itself has quite limited knowledge. And once the agency realizes that the applicant is largely ignorant of the prior art, the agency could count that fact as a secondary consideration against patentability and allow examiners to use more of their own "common sense" to fill in the gaps in the known prior art in determining whether the invention is nonobvious.¹²⁸ In that way, even with limited knowledge, the agency can impose more of a burden on the applicant to become knowledgeable and to demonstrate patentability.

Reasoned decisionmaking can also help govern decisions about the optimal timing for the Patent Office's legal analysis, and on this point, once again, reasoned decisionmaking tends to favor administrative delay over speed. Under both Supreme Court and Federal Circuit precedent, a patent applicant's commercial success with an alleged invention is relevant information for evaluating patentability.¹²⁹ That information, however, is almost never in existence at the time the patent application is filed. Indeed, because the prior art includes any offer for sale occurring more than one year before the filing of the patent application,¹³⁰ it is not possible for an inventor to have more than 12 months of sales data at the time of application filing. Typically, evidence of commercial success of a new invention requires several years to develop.

Here, once again, there is a good reason for administrative delay. The prior section in this Essay discussed one reason for delay, which is that the patent application might become moot due to commercial failure. Yet the flipside of commercial failure—commercial success—provides yet another good reason for delay. Later in time, the agency will have better information relevant to evaluating the patentability of a claimed invention. Reasoned decisionmaking generally requires that an agency consider any "important aspect of the problem" confronting it.¹³¹ Because later decisionmaking will reveal more evidence on an "important aspect of the problem," the agency has a good reason to delay. In the absence of reasons favoring expedited

^{128.} See KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 421 (2007) (holding patent examiners and other decisionmakers may use "common sense" in determining the nonobviousness of a claimed invention); *Graham*, 383 U.S. at 17-18 (permitting "secondary considerations . . . [a]s indicia of obviousness"); *id.* at 25 (weighing against patentability the deficiencies in the patent applicant's presentations to the Patent Office).

^{129.} Graham, 383 U.S. at 17 (noting that an innovator's "commercial success" may be used in determining the nonobviousness of the innovation); *In re* Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig., 676 F.3d 1063, 1075 (Fed. Cir. 2012) (describing a district court's analysis of nonobviousness as "premature" where the court reached a conclusion about obviousness before it weighed the evidence of objective considerations such as commercial success).

^{130.} See, e.g., Helsinn Healthcare S.A. v. Teva Pharm. USA, Inc., 139 S. Ct. 628, 633 (2019).

^{131.} Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 43 (1983).

decisionmaking, the agency should wait to see whether the innovation is a success or failure.

3. Reasonably Reviewed: Judicial Review of Patent Grants

One essential reform to ensure reasoned decisionmaking at the Patent Office requires overturning current Federal Circuit precedent holding judicial review of patent grants to be impliedly precluded by the Patent Act.¹³² Such precedent creates a system of asymmetric review that is highly anomalous in modern administrative law.

The importance of this one reform is difficult to overstate. In modern administrative law, the reasoned decisionmaking principle is derived from the requirement in § 706(2)(A) of the APA that reviewing courts hold unlawful and set aside agency actions found to be "arbitrary" or "capricious."¹³³ Yet that requirement is inapplicable if the agency's decision is not subject to judicial review.

In Pregis Corp. v. Kappos, the Federal Circuit held that, if the Patent Office grants a patent application through its normal ex parte examination process, that decision is unreviewable because, the court asserted, the Patent Act "impliedly" precludes judicial review of ex parte patent grants.¹³⁴ That decision is faithful neither to the APA nor to the Supreme Court's precedents interpreting the APA. In enacting the APA more than 60 years ago, Congress established an intuitively simple and general baseline by which federal courts would review any action promulgated by federal agencies. Congress explicitly made judicial review available in a general and comprehensive fashion -guaranteeing judicial review to all persons "adversely affected or aggrieved by agency action within the meaning of a relevant statute."135 Moreover, the statute defines "agency action" broadly and symmetrically, expressly extending the concept of agency "action" to include not only all forms of administrative action, but also inaction.¹³⁶ The statute has only a few narrow exclusions from its system of review,137 and it even includes a clear statement rule under which subsequent laws are not to be construed as modifying the system of judicial review "except to the extent that [the statute] does so expressly."138

^{132.} Pregis Corp. v. Kappos, 700 F.3d 1348, 1358–59 (Fed. Cir. 2012) (relying on various provisions of the Patent Act, including 35 U.S.C. \$ 134, 141, 145 (2006), to hold judicial review of patent grants impliedly precluded).

^{133. 5} U.S.C. § 706(2)(A) (2012).

^{134.} Pregis, 700 F.3d at 1358.

^{135. 5} U.S.C. § 702.

^{136.} *Id.* \$551(13) (defining "agency action" to include even the "failure to act"); *see also id.* \$701(b)(2) (applying the definition of "agency action" in \$551 for purposes of 5 U.S.C. \$701-706).

^{137.} See id. § 701(a).

^{138.} Id. § 559.

Consistent with the APA text and structure, the Supreme Court has long and consistently interpreted the statute as creating a "strong presumption that Congress intends judicial review of administrative action,"¹³⁹ which can be overcome "only upon a showing of 'clear and convincing evidence' of a contrary legislative intent."¹⁴⁰ This strong presumption, which is solidly grounded in the APA's text, is also justified by the legislative history of the statute. Indeed, the phrase "clear and convincing evidence" was drawn directly from the House Report on the APA, which stated:

To preclude judicial review under [the APA] a statute, if not specific in withholding such review, must upon its face give clear and convincing evidence of an intent to withhold it. The mere failure to provide specially by statute for judicial review is certainly no evidence of intent to withhold review.¹⁴¹

To hold that courts cannot review an administrative grant of a patent, the Federal Circuit's decision in *Pregis* relied on § 701(a)(1) of the APA, which makes the APA's system of judicial review inapplicable where "statutes preclude judicial review."¹⁴² Though nothing in the Patent Act expressly precludes judicial review, the court held that two types of provisions in the Patent Act impliedly "evince[d] a clear Congressional intent to preclude actions under the APA seeking review of the PTO's reasons for deciding to issue a patent."¹⁴³ The first set of provisions are those sections of the Patent Act that expressly confer on patent applicants a right to seek judicial review of Patent Office denials of patent applications.¹⁴⁴ The second set of provisions

^{139.} Bowen v. Mich. Acad. of Family Physicians, 476 U.S. 667, 670 (1986).

^{140.} Id. at 671 (quoting Abbott Labs. v. Gardner, 387 U.S. 136, 141 (1967)). As the Michigan Academy decision noted, id. at 672 n.3, the Court's earlier opinion in Block v. Community Nutrition Institute, 467 U.S. 340, 350 (1984), cautioned against using the "clear and convincing evidence" standard "in the strict evidentiary sense." Nevertheless, in both Block and Michigan Academy, the Court embraced the view that a clear and convincing standard "serves as 'a useful reminder to courts that, where substantial doubt about the congressional intent exists, the general presumption favoring judicial review of administrative action is controlling." Mich. Acad., 476 U.S. at 672 n.3 (quoting Block, 467 U.S. at 351). The presumption favoring review can be overcome only where "the congressional intent to preclude judicial review is 'fairly discernible' in the detail of the legislative scheme." Block, 467 U.S. at 351.

^{141.} H.R. REP. No. 79-1980, at 41 (1946). While some members of the current Supreme Court have expressed skepticism about the reliability of legislative history and reports, the legislative reports underlying the APA might be less subject to the problems commonly identified with such materials because Congress voted *unanimously* to enact the statute. Moreover, the point made by the quoted legislative history merely reinforces what seems evident from §§ 559, 701 and 702 of the statute: Congress well understood precisely what it was doing in enacting those provisions.

^{142. 5} U.S.C. § 701(a)(1).

^{143.} Pregis Corp. v. Kappos, 700 F.3d 1348, 1358 (Fed. Cir. 2012).

^{144. 35} U.S.C. §§ 134, 141, 145.

are those that confer on parties other than the patentee limited rights to seek judicial invalidation or administrative review of issued patents.¹⁴⁵

Neither set of provisions, either singly or in combination with the other, provides a good basis for concluding that the Patent Office's decisions are not subject to APA review. The Supreme Court's decision in *Sackett v. Environmental Protection Agency*¹⁴⁶ demonstrates the point. In that case, the government had succeeded in convincing every circuit to confront the issue that judicial review of EPA compliance orders was impliedly precluded by the structure of the Clean Water Act.¹⁴⁷ In defending its victory in the lower courts, the government advanced arguments very similar to the reasons advanced by the Federal Circuit in *Pregis*, but the Supreme Court unanimously rejected the arguments.¹⁴⁸

Like the court in *Pregis*, the government in *Sackett* argued that, because the relevant statute "expressly provided for prompt judicial review" in other circumstances, the presumption in favor of judicial review should be overcome and preclusion of review should be implied due to the lack of express provisions for review in the circumstances relevant to that case.¹⁴⁹ Rejecting that argument, the *Sackett* Court instructed, "if the express provision of judicial review in one section of a long and complicated statute were alone enough to overcome the APA's presumption of reviewability for all final agency action, it would not be much of a presumption at all."¹⁵⁰ The government also argued that other avenues existed to review the EPA's orders, but the Court rejected that argument as well.¹⁵¹

Finally, an overarching point about the Supreme Court's case law on implied preclusion is that the Court has never interpreted a statute as impliedly precluding judicial review on an asymmetric basis—that the

^{145.} See, e.g., *id.* § 282 (which allows accused infringers to challenge the validity in patent infringement actions, with the caveat that the patent must be "presumed valid" by the court); *id.* §§ 301-307, 311-318 (authorizing the Patent Office to administratively reexamine or review issued patents in limited circumstances).

^{146.} Sackett v. EPA, 566 U.S. 120, 128-31 (2012).

^{147.} See Sackett v. EPA, 622 F.3d 1139, 1143 (9th Cir. 2010) (noting that "[e]very circuit that has confronted this issue has held that the [Clean Water Act] impliedly precludes judicial review of compliance orders until the EPA brings an enforcement action in federal district court" and citing decisions from four courts of appeals plus several district court decisions). The circuit law was unanimous to such a degree that the Petitioners in the case did not even bother to seek certiorari on the issue. The issue was raised when the Supreme Court took the unusual step of not granting certiorari on the question presented in the Petition for Certiorari but instead *sua sponte* writing its own questions presented, with the first of the Court's questions directed to the implied preclusion issue. See Sackett v. EPA, 564 U.S. 1052 (2011).

^{148.} See Sackett, 566 U.S. at 128–31 (reciting and then rejecting all of the government's arguments).

^{149.} Id. at 129.

^{150.} Id.

^{151.} *Id.* at 130 (counting as a point against the government's argument that the statute's "primary review mechanisms" would eventually be open to the Petitioners in the case).

agency's reasoning is subject to review if it decides a matter one way, but immune if it goes the other way. The absence of such case law is justified, for it is difficult to believe that Congress would want an agency to be constrained by a principle of reasoned decisionmaking if it decides matters before it in one direction, but to be free to make decisions in the other direction in an arbitrary and capricious manner.

B. REASONED DECISIONMAKING IN AIA POST-ISSUANCE PROCEEDINGS

Reasoned decisionmaking is a guiding principle relevant not only for structuring the agency's initial examination processes, but also for establishing the relationship among sequential agency proceedings. The particularly relevant principle—the strand of doctrine within the larger thread of reasoned decisionmaking—is the so-called "swerve" doctrine, which requires that "an agency changing its course [from prior decisions] must supply a reasoned analysis" for the change.¹⁵² The swerve doctrine guides how agencies should address the interplay between a sequence of agency decisions—a matter that is increasingly relevant to the Patent Office as it must decide not only the relationship between initial examination and post-issuance proceedings, but also the relationship amongst multiple post-issuance proceedings.

The agency's difficulty in working out a reasoned relationship between initial examination and post-issuance proceedings was evident in *Tinnus Enterprises, LLC v. Telebrands Corp.*¹⁵³ In that case, a competitor filed a post-grant review challenge against a patent on a toy that would automatically produce multiple filled water balloons when attached to a water hose.¹⁵⁴ The competitor argued, inter alia, that the patent claims were indefinite due to the phrase "substantially filled," which described the state of the water balloons after they were produced by the patented invention.¹⁵⁵ The Patent Office's Board of Patent Trial and Appeals agreed with the competitor and invalidated the patent.¹⁵⁶ In reversing, the Federal Circuit relied mainly on conventional indefiniteness principles from circuit and Supreme Court case law.¹⁵⁷

The interesting part of the case begins when the court, after finishing its conventional analysis of indefiniteness, notes that "[t]he prosecution history provides further evidence that the claim term is not indefinite."¹⁵⁸ The court then explains that the disputed phrase, which did not appear anywhere in the

^{152.} Motor Vehicle Mfrs. Ass'n v. State Farm Mut. Auto. Ins. Co., 463 U.S. 29, 57 (1983) (quoting Greater Bos. Television Corp. v. FCC, 444 F.2d 841, 852 (D.C. Cir. 1970)).

^{153.} Tinnus Enters., LLC v. Telebrands Corp., 733 F. App'x 1011 (Fed. Cir. 2018).

^{154.} *Id.* at 1012–13.

^{155.} Id. at 1013 (quoting claim language).

^{156.} Id. at 1014.

^{157.} Id. at 1018–19 (applying canonical case law on indefiniteness).

^{158.} Id. at 1019.

original application, was added to the claims not by the applicant, but through an examiner's amendment in the Notice of Allowance. As a reason to reject the agency's new conclusion of indefiniteness, the court quite reasonably "presume[d] that an examiner would not introduce an indefinite term into a claim when he/she chooses to amend the claim for the very purpose of putting the application in a condition for allowance."¹⁵⁹

The swerve doctrine provides further support for the Federal Circuit's decision. Given that the agency itself entered the term, the Board's decision invalidating the patent represented a dramatic change from the agency's prior position. The swerve doctrine would ordinarily require the agency to provide reasoning that both acknowledges the switch in position and justifies the change. While the swerve doctrine does not mean that an agency must "always provide a more detailed justification than what would suffice" if it were operating "on a blank slate," "[s]ometimes it must."160 And one case in which a better explanation may be required is where the agency is making factual findings contradicting its old position. That circumstance seems present in the Tinnus case, for although indefiniteness is ultimately a legal conclusion, it is based on underlying facts about the capabilities of a person having ordinary skill in the art. The examiner must have thought that persons with skill in the art would understand the meaning of the term; the PTAB should have explained why the agency was changing the agency's position on that issue. The swerve doctrine promotes administrative consistency, and as patent examination is increasingly only the beginning of multiple administrative processes, the courts and the Patent Office should look to the swerve doctrine as a means for promoting administrative consistency in reasoning.

The swerve doctrine also has some application to another issue arising from the AIA's expansion of post-issuance proceedings. The agency is now frequently confronted with multiple sequential petitions to institute postgrant or *inter partes* review proceedings against the same patent. Parties seeking to institute adversarial post-issuance proceedings have no right to demand such proceedings, and the agency's decision to institute such actions lies largely within the agency's unreviewable discretion.¹⁶¹

^{159.} Id. at 1020.

^{160.} FCC v. Fox TV Stations, Inc., 556 U.S. 502, 515 (2009).

^{161.} See 35 U.S.C. \$\$ 314(a), 324(a) (2012) (setting forth the legal thresholds for instituting, respectively, *inter partes* and post grant review but not requiring any review where the threshold is met); *id.* \$\$ 314(d), 324(e) (expressly providing the agency decisions to institute, respectively, *inter partes* and post grant reviews, are "final and nonappealable"); Cuozzo Speed Techs., LLC v. Lee, 136 S. Ct. 2131, 2140 (2016) (relying on \$314(a) to conclude that the "decision to deny a petition [for *inter partes* review] is a matter committed to the Patent Office's discretion"); *id.* at 2141 (concluding that \$314(d) largely precludes judicial review of the Patent Office's decisions to institute *inter partes* review). The *Cuozzo* court did note, however, that certain fundamental flaws or "shenanigans" in the agency's decision to institute proceedings could be cause for a court setting aside the agency's final order pursuant to the judicial review authorized at the conclusion of the agency's proceedings. *Id.* at 2141–42.

In such situations, the swerve doctrine suggests not only that the agency should be consistent in its reasoning, but also in its results. Where the Patent Office has not only issued the patent, but also once sustained the validity of the patent in an adversarial post-issuance proceeding brought by a third party with good economic incentives to challenge the patent, the Patent Office must decide whether the mere fact of the earlier post-issuance proceeding should be a factor favoring denial of any subsequent petition. While the Patent Office is unlikely to grant sequential petitions presenting the same arguments raised in a previous petition, the Patent Office should probably do more—it should probably be skeptical of sequential petitions even if the arguments raised are different. Consistent with the swerve doctrine, such skepticism does not mean that the Patent Office should never grant such a petition; rather, it means merely that the Patent Office should have a reason for thinking that the arguments raised and lost in the prior proceeding might not have been the best arguments available.

V. CONCLUSION

With great power comes great responsibility. In 2011, Congress conferred on the Patent Office dramatically expanded powers for determining the validity of patents. While a rational ignorance theory was probably never appropriate for the Patent Office once Congress enacted the Patent Act of 1836, the theory is especially inappropriate in the post-AIA era. With its substantially expanded administrative powers, the Patent Office must take greater responsibility for the substantive content of patents and for the processes by which it grants those patents. Administrative ignorance won't do.

The administrative concept of reasoned decisionmaking supplies the best guide for the agency as it shoulders ever greater responsibilities. The concept has a long legal pedigree; it has been applied generally to other administrative agencies; and it provides a comprehensive framework for making decisions not only about the degree to which the agency should be knowledgeable or ignorant but also about the agency's overall approach toward exercising its various administrative responsibilities.

Yet reasoned decisionmaking is not merely a guide; it is also a constraint. Following modern administrative law, courts do not merely encourage agencies to reason well; they demand it. They should do the same with the Patent Office. The federal courts should be more open to reviewing all actions of the Patent Office—including initial patent grants and administrative decisions structuring the processes of the Patent Office. Reasoned decisionmaking and the general doctrines of modern administrative law authorize courts to push agencies toward more thoughtful and considered decisions. It is long overdue to have the same approach applied to administrative patent decisions.