RELATIVE AND ABSOLUTE PATENTABILITY

Timothy R. Holbrook[*] *& Mark D. Janis*[**]

In this Article, we define and interrogate a new typology for patentability rules. In our typology, some rules are predominantly relative inquiries—meaning that they entail the use of discrete comparators—whereas others are predominantly absolute in that they lack this core comparative methodology. Selected patentability rules blend the characteristics of both relative and absolute inquiries in complex ways.

We leverage our relative/absolute typology in this Article to make two sets of contributions to the literature. First, we use our typology to craft a new descriptive account of the patentability doctrines. We show that the requirements of novelty and nonobviousness are almost exclusively relative measures of patentability, while the requirements of eligible subject matter and utility are almost exclusively absolute measures of patentability. Other requirements—namely the enablement and written description requirements, both inquiries into the adequacy of the patent disclosure—are blended, with the enablement requirement tipping towards the relative and the written description requirement largely absolute. In light of these observations, we argue that the typology is an attractive pedagogical tool for explaining the patentability rules in a new way in judicial, administrative, academic, and other settings where such explanations are critical.

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* Provost's Professor and Robert B. Yegge Endowed Distinguished Professor in Law, University of Denver Sturm College of Law.

** Robert A. Lucas Chair and Professor of Law, Director, Center for Intellectual Property Research, Indiana Maurer School of Law. The authors want to thank participants at the 2024 PatCon Conference at the University of San Diego School of Law, the 2024 Works-in-Progress IP conference at Santa Clara Law School, the 2024 Patent Scholars Roundtable at Vanderbilt Law School, and 2023 Intellectual Property Scholars Conference at Cardozo Law for helpful comments and questions. We also want to thank Jonas Anderson, Kevin Collins, Nikola Datzov, Laura Dolbow, Jeanne Fromer, Chris Holman, Mark Lemley, Oskar Liivak, Mark McKenna, Lisa Ouellette, Josh Sarnoff, David Schwartz, Sean Seymore, Ted Sichelman, Jay Thomas, and Saurabh Vishnubhakat for comments and suggestions.

The second contribution is normative. We assert that our typology offers a new framework within which to address some longstanding patent law debates, and some new ones. Regarding the latter, we float a provocative proposal to reformulate the scope of ex parte examination along the lines of our typology, relieving the U.S. Patent and Trademark Office of the burden of examining applications for compliance with the absolute patentability requirements, leaving those requirements for assessment in contested proceedings such as litigation. We also discuss procedural changes that would be necessary to implement such a proposal.

We conclude that the relative/absolute typology affords a new vocabulary for exploring core doctrines in substantive patent law and foundational institutional arrangements in the patent system. It may also extend beyond the doctrinal contexts we explore here.

TABLE OF CONTENTS

INTRODUCTION

Structurally and conceptually, the collective set of requirements for obtaining a U.S. patent is a cipher.[1] The requirements[2]—which some would say number six or more, others fewer[3]—are splayed across several sections of the patent statute.[4] Some seem to overlap with others.[5] Distinct doctrines are sometimes treated as if they were unitary.[6] There is no consensus about the order in which they ought

1. For simplicity, we refer here to "patentability" requirements, by which we mean a set of requirements that arises both in the pre-grant and post-grant contexts—i.e., the process of obtaining a grant of patent rights initially from the U.S. Patent and Trademark Office (USPTO), and the process of defending the validity of those granted patent rights later when challenged in administrative proceedings or infringement litigation.

2. We will go with five. The claimed invention must (1) constitute eligible subject matter, (2) possess utility, (3) be novel, (4) be nonobvious, and (5) be adequately disclosed in accord with at least the enablement and written description requirements. We are omitting the requirement for claim definiteness, for reasons explained *infra* note 13.

3. As recently as 2022, the very existence of one of these requirements—the written description requirement—was the subject of certiorari-stage arguments at the U.S. Supreme Court, with proponents asserting that the requirement has existed since roughly the dawn of U.S. patent law, and opponents arguing that the requirement is nothing more than a figment of the modern judicial imagination. *See, e.g.*, Brief of Mark D. Janis and Timothy R. Holbrook as Amici Curiae Supporting Petitioners at 12, Juno Therapeutics, Inc. v. Kite Pharma, Inc., 143 S. Ct. 631 (2023) (No. 21-1566) [hereinafter Janis & Holbrook Amicus Brief in *Juno Therapeutics*].

4. 35 U.S.C. § 101 (eligible subject matter; utility); *id.* § 102 (novelty); *id.* § 103 (obviousness); *id.* § 112(a) (enablement and written description).

5. *See, e.g.*, *In re* Brana, 51 F.3d 1560, 1564 n.12 (Fed. Cir. 1995) (observing that the utility and enablement requirements overlap); Ariad Pharms., Inc. v. Eli Lilly & Co., 598 F.3d 1336, 1352 (Fed. Cir. 2010) (en banc) (conceding that the enablement and written description requirements "often rise and fall together").

6. For example, novelty is distinct from nonobviousness. Yet it has been said that a lack of novelty is the "epitome of obviousness." Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548 (Fed. Cir. 1983) (quoting *In re* Fracalossi, 681 F.2d 792, 794 (C.C.P.A. 1982)).

to be taken up by decision-makers,[7] or the order in which they are most efficaciously introduced to law students.[8] And we are speaking here about substantive rules of real consequence—rules that lie at the core of the day-to-day operation of the patent system.

Still, the patent community does not seem especially fussed about this state of affairs. Patent lawyers seem to have become accustomed to it, even if learning it initially is a bit challenging. Scholars have not focused on it.[9] Congress has not felt compelled to rethink or reorder the statute, even though it could have when it undertook comprehensive reforms in the America Invents Act (AIA) of 2011.[10]

In this Article, we take a new look at the structure of the patentability requirements. In doing so, we aim to stir up some controversy where (some might argue) little currently exists. But to

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7. *Compare* Ultramercial, Inc. v. Hulu, LLC, 772 F.3d 709, 718 (Fed. Cir. 2014) (Mayer, J., concurring) (arguing that subject matter eligibility "must be addressed at the outset of litigation"), *with* U.S. PAT. & TRADEMARK OFF., MANUAL OF PATENT EXAMINING PROCEDURE § 2103 (9th ed., rev. 2023) [hereinafter MPEP] (placing patentable subject matter analysis later in the examination process). And the order of analysis actually has practical implications. *See, e.g.*, Dennis Crouch & Robert P. Merges, *Operating Efficiently Post*-Bilski *by Ordering Patent Doctrine Decision-Making*, 25 BERKELEY TECH. L.J. 1673, 1690 (2010) (proposing that the eligibility requirement be addressed only after addressing the other patentability requirements).

8. Among numerous other examples, see, for example, PATENT LAW: AN OPEN-SOURCE CASEBOOK 8–12 (Mark D. Janis & Ted Sichelman eds., 2023) [hereinafter OPEN-SOURCE CASEBOOK] (eligible subject matter, utility, disclosure, novelty, nonobviousness); JONATHAN S. MASUR & LISA LARRIMORE OUELLETTE, PATENT LAW: CASES, PROBLEMS, AND MATERIALS 4–6 (3d ed. 2023) (novelty, nonobviousness, utility, disclosure, and eligible subject matter).

9. Andres Sawicki has categorized the patentability doctrines into four categories "based on the goals served by each set of rules." Andres Sawicki, *Better Mistakes in Patent Law*, 39 FLA. ST. U. L. REV. 735, 751 (2012). His categories are scope rules that limit control over downstream innovation; invention rules that deny patent protection for extant inventions or those that inevitably will be created; disclosure rules to allow improvement or cheaper substitutes; and definiteness rules to help parties avoid inadvertent exposure to liability. *Id.* Our categorization is different, focusing on the nature of the inquiry and the need to consult information exogenous to the public document.

10. Leahy-Smith America Invents Act (AIA), Pub. L. No. 112-29, 125 Stat. 284 (2011). In shifting the U.S. patent system to a first-inventor-to-file regime under the AIA, Congress sought to reformulate prior art doctrines in a way that is "more coherent, albeit more complex." Timothy R. Holbrook, *Patent Prior Art and Possession*, 60 WM. & MARY L. REV. 123, 138 (2018). But Congress missed the opportunity to incorporate a new organizing rubric into the statute that would have encompassed all of the patentability doctrines, probably because the calls for patent reform that resulted in the AIA were not tied to restructuring the law of patentability as a whole. *See* NAT'L RSCH. COUNCIL, A PATENT SYSTEM FOR THE 21ST CENTURY 87–94 (Stephen A. Merrill et al. eds., 2004) (suggesting that Congress was focused on the operation of particular patentability doctrines, such as nonobviousness).

the extent that the structure of patentability doctrine has become ossified, it makes some sense to rattle the old bones.

Starting with the observation that there are material conceptual characteristics that distinguish certain patentability rules from their counterparts, we propose a new typology that reflects those distinctions. In particular, we define the categories of "relative" and "absolute" patentability rules.[11] Relative measures, we explain, entail the use of discrete comparators, whereas absolute measures do not.[12] This Article is the first to define and interrogate this typology in patent doctrine.

We then deploy this typology to make two broad sets of contributions to the literature. First, we use our typology to craft a new descriptive account of patentability doctrines. We show that the requirements of novelty and nonobviousness are almost exclusively relative measures of patentability, while the requirements of eligible subject matter and utility are almost exclusively absolute. Other requirements—namely the enablement and written description requirements, both measures of the adequacy of the patent disclosure—are blended, with the enablement requirement tipping towards the relative and the written description requirement (accepting *arguendo* that it exists as a distinct requirement) operating as largely absolute.[13] In light of these observations, we argue that the typology is an attractive pedagogical tool for explaining the patentability rules in a new way in judicial, administrative, academic, and other settings where such explanations are critical.

Second, we make a set of normative contributions. We assert that our typology offers a new framework within which to address some longstanding patent law debates (such as proposed legislative abrogation of aspects of the jurisprudence of subject matter eligibility),[14] and some new ones (such as the influence of ex parte pre-grant substantive patentability examination on patent quality).[15] Regarding the latter, we float a provocative proposal to reformulate the scope of ex parte examination along the lines of our typology,

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11. *See infra* Subpart I.A.

12. *See infra* Subpart I.B.

13. *See infra* Part II. As noted, we are not attempting here to map the doctrine of indefiniteness onto our typology. Definiteness is a condition of patentability, to be sure. Nautilus, Inc. v. Biosig Instruments, Inc., 572 U.S. 898, 910 (2014) (ruling that a claim is invalid for indefiniteness if it fails to "inform those skilled in the art about the scope of the invention with reasonable certainty"); 35 U.S.C. § 112(b) (source of the definiteness requirement). But the analysis for definiteness mirrors that for patent claim construction. *See* OPEN-SOURCE CASEBOOK, *supra* note 8, at 85–121. In this Article, we are not arguing that the relative/absolute distinction materially advances our understanding of patent claim construction, and so, by extension, we are not making an argument with respect to indefiniteness doctrine.

14. *See infra* Part III.

15. *See infra* Part IV.

relieving the U.S. Patent and Trademark Office (USPTO) of the burden of examining applications for compliance with the absolute patentability requirements and leaving those for assessment in contested proceedings such as litigation. We also discuss other changes that would be necessary to implement such a proposal, including potential changes to administrative challenge proceedings and to procedural rules for invalidating patents in litigation. Thus, the typology offers a new vocabulary for exploring and potentially reformulating core doctrines in substantive patent law while also providing a framework for rethinking the patent system's foundational institutional arrangements.

This Article first offers definitions of relative and absolute patentability rules, contrasting our definitions with those found in European trademark law. Part II applies those definitions to categorize the patentability doctrines. We identify the relative doctrines—novelty and nonobviousness—as well as the absolute ones—eligible subject matter and utility. We then work through the mixed doctrines of 35 U.S.C. § 112(a), written description and enablement. Part III uses this typology to reframe the debates over eligible subject matter and the disclosure obligations. While we offer some prescriptions, this Part ultimately shows how the relative/absolute typology illuminates the doctrinal struggles and points us towards potential reform. Part IV offers a radical prescription for patent examination: ex parte patent examination should only consider relative doctrines, leaving absolute doctrines to be assessed through contested proceedings in the USPTO or the courts. We lay out the case against ex parte examination of absolute patentability inquiries, explain why we would retain ex parte examination of relative inquiries, and address implementation issues and patent quality considerations. The Article then concludes.

I. DERIVING RELATIVE AND ABSOLUTE PATENTABILITY

In Subpart A, we define our relative/absolute typology. In Subpart B, we distinguish it from other rubrics and methodologies.

A. Defining the Concepts

We first take up the task of defining the concepts of relative and absolute patentability rules. When we refer to a patentability rule as relative, we mean that it must involve a particularized comparison between two discrete things. Moreover, in a relative patentability rule, as we define it, the objects being compared must both be discretely identifiable ex ante. For example, as we will further elaborate,[16] we define the patentability rule of anticipation as relative

16. *See infra* Subpart II.A.1. Any legal rule, in application, could be said to involve a comparison of sorts between the elements of the legal rule and the facts.

because inherent in the rule is a comparison between the subject invention (particularized ex ante in the form of an individual patent claim) and the prior art (particularized ex ante in the form of a legally qualified prior art reference).

When we refer to a requirement of patentability as "absolute," we mean that the tests elaborated for complying with it lack a requirement for a particularized comparison. At a minimum, this means that even if the test involves a methodology that conceivably could be analogized to a comparison, one or both objects of that comparison are not delineated ex ante with particularity. For example, as we will explain,[17] the patentability doctrine of eligible subject matter involves determining whether an invention falls within a statutorily-defined subject matter category. In theory, a court would look at the claim and determine whether the claim constitutes eligible subject matter relative to the legal standard. This would constitute an absolute rule. But that is merely one species of absolute rule because, in reality, the tests for eligibility do not necessarily constrain the decision-maker to refer to a particularized patent claim or to compare that claim to any pre-defined object of comparison. Absolute rules of patentability thus entail the general application of legal rules to facts, but only in that most generic sense may be said to involve any comparison at all, let alone a particularized comparison between discrete comparators. In sum, relative patentability rests on discrete comparators. Absolute patentability does not.

As will become apparent when we consider how patentability doctrines actually operate, the relative and absolute designations mark out the opposite poles in a spectrum rather than reflecting some neat instance of bipolarity. Some patentability doctrines operate as almost purely absolute inquiries (such as utility), while others are purely relative (such as anticipation). Other doctrines are profoundly blended (such as the disclosure obligations). Thus, our definitions should be understood to acknowledge the possibility of blended inquiries. The existence of blending presents some interesting normative questions about whether blended patentability doctrines effectuate the goals of the patent system, as well as whether and how to reformulate them if, as we will discuss, extensive blending proves to be a bad idea.

To our knowledge, our proposed typology of absolute and relative rules of patentability is new to the scholarly discourse. We find fleeting references to concepts of absolute and relative patentability

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That is not what we mean by a particularized comparison between discrete comparators.

17. *See infra* Subpart II.B.2.

in European patent law from a pair of sources, but the concepts are not defined or elaborated there.[18]

European trademark law relies much more prominently on a type of absolute/relative typology, and that typology warrants mention here even though it differs from ours in some respects. The Regulation[19] and Directive[20] governing European trademark law distinguish between absolute and relative grounds for refusing (or invalidating) registrations.[21] Absolute grounds apply when "the inherent characteristics of the trademark in question" render it unregistrable (or its registration invalid),[22] while relative grounds

18. *See* Case T 154/04, Estimating Sales Activity/DUNS LICENSING ASSOCS., [2008] O.J.E.P.O. 46 (Tech. Bd. Appeal 3.5.01, Nov. 15, 2006) (construing the phrases "invention" and "inventive step" in European Patent Convention Article 52(1), which states that "European patents shall be granted for any inventions, in all fields of technology, provided that they are new, involve an inventive step and are susceptible of industrial application"). In seeking to establish that the requirements for an "invention" and an "inventive step," respectively, were independent, the Board asserted that "[t]he presence of technical character in an invention (as well as for the industrial applicability) is an absolute requirement that does not imply any new contribution to the prior art." *Id.* para. 9; *see also id.* para. 10 (stating that Article 52(1) "abstracts the concept of 'invention' as a general and absolute requirement of patentability from the relative criteria novelty and inventive step . . . as well as from the requirement of industrial applicability"). But although the Board proceeded to say that this distinction is "not unknown" in national patent jurisprudence in Europe, *id.* para. 11, the cases it cites do not appear to use that rhetoric, and we have not uncovered other European sources that explore the distinction. *See, e.g.*, EUR. PAT. OFF., CASE LAW OF THE BOARDS OF APPEAL OF THE EUROPEAN PATENT OFFICE 4 (10th ed. 2022) (referring to absolute and relative patentability requirements and summarizing T 154/04, but offering no further explanation).

19. Regulation 2017/1001, of the European Parliament and of the Council of 14 June 2017 on the European Union Trade Mark, 2017 O.J. (L 154), arts. 7–8 [hereinafter Regulation].

20. Directive 2015/2436, of the European Parliament and of the Council of 16 December 2015 to Approximate the Laws of the Member States Relating to Trade Marks, 2015 O.J. (L 336), arts. 4–5 [hereinafter Directive].

21. Regarding absolute grounds, see Regulation, *supra* note 19, art. 7 (applicable to refusal of registration); *id.* art. 59 (applicable to invalidity in *inter partes* administrative proceedings or infringement proceedings). Regarding relative grounds, see *id.* art. 8 (applicable to refusal of registration); *id.* art. 60 (applicable to invalidity in *inter partes* administrative proceedings or infringement proceedings). The Directive is organized slightly differently. The EU Directive lists the grounds for refusal to register a trademark and the grounds to invalidate a trademark together, Directive, *supra* note 20, whereas the EUTMR separates refusal and invalidity into separate articles, Regulation, *supra* note 19, arts. 59–60 (stating the absolute grounds for invalidity in Article 59 but the relative grounds for invalidity in Article 60).

22. *Annual Review of European Trademark Law*, 113 TRADEMARK REP. 385, 388–89 (2023).

apply when the mark conflicts with earlier rights.[23] More particularly, absolute grounds include some conditions that lie at the core of what defines a trademark (such as distinctiveness),[24] along with others that could be said to reflect policy considerations adjacent or external to trademark law (such as whether the mark contravenes "accepted principles of morality").[25] Relative grounds may be raised where the mark at issue is identical or similar to an earlier registered or (under specified conditions) unregistered mark,[26] or where the mark at issue would "take unfair advantage of, or be detrimental to, the distinctive character" or reputation of an earlier mark.[27] In either event, a characteristic of a relative ground—in contrast to an absolute ground—is that the mark at issue must be compared against a particularized target: the "earlier trade mark," as defined in the legislation.[28] A roughly similar pattern can be seen in U.S. trademark law, although U.S. law has not adopted the absolute/relative rhetoric expressly.[29]

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23. *Id.* at 412.

24. Examples include whether the mark is capable of distinguishing the goods or service of one firm from those of another (that is, whether the mark is capable of carrying out the essential function of a mark), *see* Regulation, *supra* note 19, art. 7(1)(a) (incorporating Article 4(a)); whether a mark is descriptive, *see id.* art. 7(1)(c); whether a mark is generic, *see id.* art. 7(1)(d); or whether a mark is non-functional, *see id.* art. 7(1)(e). "Absolute" as used in European trademark law is not synonymous with "permanent" or "unremediable." Some absolute grounds may be overcome by a showing of secondary meaning. *See id.* art. 7(2) (specifying those grounds).

25. In addition to the morality ground, *id.* art. 7(f), other examples include whether the mark is deceptive, *see id.* art. 7(g); whether a mark is functional, *see id.* art. 7(e)(i)–(iii); or whether it is a "sign of high symbolic value, in particular a religious symbol," Directive, *supra* note 20, art. 4(3)(b) (giving Member States the option to adopt this provision).

26. Regulation, *supra* note 19, art. 8(1)(a) (applicable in instances of "double identity," meaning that the mark at issue and its goods/services are identical to the earlier mark and its good/services); *id.* art. 8(1)(b) (applicable where there is a likelihood of confusion between the earlier mark and the mark at issue because of the similarity between the respective marks and their respective goods/services); *see also id.* art. 8(2) (defining "earlier trade mark" to include registered and some unregistered marks).

27. *Id.* art. 8(5) (requiring that the earlier mark "has a reputation"); *Annual Review of European Trademark Law*, *supra* note 22, at 412 (noting that Article 8(5) is comparable to the concept of trademark dilution in U.S. law).

28. *See Annual Review of European Trademark Law*, *supra* note 22, at 412.

29. For example, the Lanham Act requires the USPTO to refuse registration on the Principal Register where a mark consists of or includes the United States flag, 15 U.S.C. § 1052(b); where a mark is deceptive, *id.* § 1052(a); or where a mark is functional, *id.* § 1052(e)(5). These inquiries are comparable to the absolute grounds under European trademark law—none depends on comparison to a prior mark. The Lanham Act also specifies that registration on the Principal Register will be refused if the mark resembles a prior registered or unregistered mark or trade name as to cause confusion. *Id.* § 1052(d). To resolve a dispute of

Our proposed typology adopts a similar concept of an absolute inquiry but a quite different concept of a relative inquiry. In both the European trademark law typology and ours, absolute grounds come into play to vindicate matters of public policy and involve no comparison between discrete comparators. However, in European trademark law, relative grounds are used only to adjudicate competing claims of rights among private interests, whereas we have defined relative patentability inquiries much more expansively.[30] As we have defined it, a relative patentability inquiry might involve determining whether a claimed invention is anticipated by a prior art reference and, thus, is not novel,[31] unaccompanied by any determination as to whether the originator of the prior art reference holds superior rights, or any rights at all.[32]

B. Distinguishing the Concepts from Other Organizing Principles

The relative/absolute typology, as we have defined it, is not merely a surrogate for other more familiar dichotomies, notwithstanding some superficial similarities. First, while our description of the relative/absolute typology might remind some of the rules/standards debate,[33] the former is not on all fours with the latter. As we will see, we classify both anticipation (novelty) and obviousness as relative patentability inquiries. Yet, anticipation is largely rule-

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this latter type, the decision-maker compares the applicant's mark to the prior mark—a relative inquiry. In U.S. trademark law, "absolute" is used in another sense not germane here: to refer to a bar to registration that cannot be overcome with evidence of secondary meaning. GRAEME B. DINWOODIE & MARK D. JANIS, TRADEMARKS AND UNFAIR COMPETITION: LAW AND POLICY 401 (6th ed. 2022).

30. These private interests are also only adjudicated in *inter partes* proceedings, whereas the absolute grounds can be raised in both ex parte and *inter partes* settings. *See infra* notes 226–28 and accompanying text.

31. 35 U.S.C. § 101 (requiring the invention be "new" for a patent).

32. Were we to define relative patentability inquiries narrowly to conform to the usage in European trademark law, relative patentability inquiries would only arise in exceptionally rare instances involving interference claims under the 1952 Act, 35 U.S.C. § 102(g)(1) (amended 2015), or perhaps derivation proceedings under the America Invents Act, 35 U.S.C. § 135. Our proposal speaks instead to patentability inquiries that are far more common, such as patentability over the prior art.

33. Louis Kaplow, *Rules Versus Standards: An Economic Analysis*, 42 DUKE L.J. 557, 559–60 (1992). For a discussion of the rules/standard debate as applied in patent law, see John F. Duffy, *Rules and Standards on the Forefront of Patentability*, 51 WM. & MARY L. REV. 609, 610–11 (2009); Timothy R. Holbrook, *Substantive Versus Process-Based Formalism in Claim Construction*, 9 LEWIS & CLARK L. REV. 123, 126–27 (2005); John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U. L. REV. 771, 775 (2003).

based while obviousness is surely a standard (though driven by some subsidiary rules).[34]

Second, the relative/absolute typology is not just a rearticulation of the fact/law distinction. Again, while anticipation and obviousness are both relative inquiries, anticipation has been characterized as a question of fact,[35] while obviousness has been designated a question of law.[36]

Third, Janet Freilich has offered a typology of patent examination that entails "matching" and "digging."[37] Matching entails "selecting a statement and searching for a similar statement in a documented elsewhere," whereas digging explores "the quality of the information they find."[38] Her concern is information quality and not the fundamental nature of these inquiries.[39]

Finally, the relative/absolute typology is not merely a reincarnation of the person having ordinary skill in the art (PHOSITA), an important legal construct in patent law.[40] All of the patentability doctrines we discuss use the PHOSITA construct, which does not signal a distinction between relative and absolute patentability inquiries.

II. CHARACTERIZING PATENTABILITY DOCTRINES USING THE CONCEPTS OF RELATIVE AND ABSOLUTE PATENTABILITY

In this Part, we apply our definitions of relative and absolute patentability. We survey and categorize five patentability doctrines as predominantly relative or absolute—or, in the case of the description doctrines, as blended.

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34. Likewise, we characterize subject matter eligibility as an absolute patentability inquiry, yet eligibility analysis may involve resorting to bright-line rules—for example, a rule that is favored by some judges is one that excludes business methods per se from eligibility. Bilski v. Kappos, 561 U.S. 593, 643 (2010) (Stevens, J., concurring).

35. Advanced Display Sys., Inc. v. Kent State Univ., 212 F.3d 1272, 1283 (Fed. Cir. 2000).

36. Graham v. John Deere Co., 383 U.S. 1, 17 (1966).

37. Janet Freilich, *Ignoring Information Quality*, 89 FORDHAM L. REV. 2113, 2115–16 (2021).

38. *Id.* at 2119, 2122.

39. In addition, our concept of relative patentability inquiries does not align exactly with Professor Freilich's concept of mapping. For example, Professor Freilich characterizes the utility doctrine as involving mapping, whereas we conclude that utility is an absolute patentability inquiry. *Id.* at 2120, 2122.

40. *See* Laura Pedraza-Fariña & Ryan Whalen, *The Ghost in the Patent System: An Empirical Study of Patent Law's Elusive "Skilled Artisan,"* 108 IOWA L. REV. 247, 249 (2022); *see also* Timothy R. Holbrook & Mark D. Janis, *How the Supreme Court Ghosted the PHOSITA:* Amgen *and Legal Constructs in Patent Law*, 109 IOWA L. REV. ONLINE 83, 85 (2024).

A. Identifying the Relative Grounds of Patentability

Our definition of a relative inquiry requires that it involve a comparison between ex ante, discrete comparators. The classic versions of such analysis compare the claim in a patent to the prior art.[41] Thus, according to our typology, the inquiries into anticipation (novelty) and obviousness qualify as relative inquiries. We offer our explanations below.

1. Anticipation

The inquiry into anticipation is the most straightforward example of a relative patentability inquiry. When a patent claim is not novel, it is said to be anticipated by the prior art.[42] The rule specifies that an invention anticipated by the prior art is not new and is thus unpatentable.[43] Anticipation demands a particularized comparison. On one side of the comparison is the invention as defined ex ante by an individual patent claim, subdivided into its limitations.[44] On the other side is a single, statutorily-defined source of prior art.[45] Anticipation occurs only if each and every limitation of the subject claim is found in a single prior art reference (meaning a single source that qualifies as prior art under the statute, such as a single scientific article) as arranged in the claim.[46]

In the anticipation analysis, the decision-maker's discretion is constrained on both sides of the comparison. The decision-maker cannot merely abstract away from the claim language and conjure up

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41. The prior art is the set of materials that a decision-maker may consider in determining whether an invention is new or nonobvious. *See* Holbrook, *supra* note 10, at 127; *see also* Jonathan S. Masur & Lisa Larrimore Ouellette, *Real-World Prior Art*, 76 STAN. L. REV. 703, 705 n.5 (2024) ("'Prior art' is simply the patent term for *something*—a patent, a printed publication, an offer of the invention for sale, a public use of the invention, or some other activity that makes the patented technology available to the public—that precedes the filing of a patent application and might render the invention not novel (and thus not patentable)."). Prior art generally is defined by 35 U.S.C. § 102(a) under the AIA.

42. *See* Jamesbury Corp. v. Litton Indus. Prods., Inc., 756 F.2d 1556, 1560 (Fed. Cir. 1985) (reviewing jury verdict of "invalidity for lack of novelty (i.e., anticipation)").

43. Schering Corp. v. Geneva Pharms. Inc., 339 F.3d 1373, 1377 (Fed. Cir. 2003).

44. *See* Atlas Powder Co. v. Ireco Inc., 190 F.3d 1342, 1347 (Fed. Cir. 1999) (citing *In re* King, 801 F.2d 1324, 1326 (Fed. Cir. 1986)).

45. 35 U.S.C. § 102(a)(1)–(2); *see also* Holbrook, *supra* note 10, at 135–42 (explaining the concept of prior art and the operation of § 102 under the 1952 Patent Act and as amended in the America Invents Act).

46. Finisar Corp. v. DirecTV Grp. Inc., 523 F.3d 1323, 1334 (Fed. Cir. 2008) (citing Celeritas Techs., Ltd. v. Rockwell Int'l Corp., 150 F.3d 1354, 1361 (Fed. Cir. 1998)); *see also* Timothy R. Holbrook, *Patent Anticipation and Obviousness as Possession*, 65 EMORY L.J. 987, 1012–19 (2016) (arguing that the "as arranged" requirement is of suspect genesis and is unnecessary).

some "concept" or "gist" of the invention to use as the basis for comparison. Instead, the decision-maker must look to each limitation in the claim to determine if it is found in the single piece of prior art. If one limitation is missing, the claim is novel. Likewise, the decision-maker cannot decide *post hoc* that a given source of information ought to be included as part of the body of prior art for purposes of defeating the claim. Instead, the prior art reference must satisfy the relevant statutory parameters (generally relating to the type of evidence and its date) if it is to be used as the basis for an anticipation inquiry. Thus, there are clear, ex ante discrete comparators.

2. Obviousness

Obviousness is best characterized as a relative inquiry. However, it is more complex than anticipation and involves some subsidiary inquiries that reasonably could be considered absolute. Obviousness is based on the premise that, even if the invention is new, an applicant should not receive a patent if the invention represents a minor, if not inevitable, advance in the state of the art.[47] Thus, like anticipation, obviousness is fundamentally comparative, as it compares the claimed invention and the prior art.[48]

Moreover, both objects of the comparison are particularized ex ante, albeit not to the same extent as for the anticipation inquiry. The invention, as defined in a single patent claim, lies at one side of the comparison, as it does for the anticipation inquiry. The obviousness inquiry permits reference to the "claimed invention as a whole,"[49] which affords the decision-maker room to consider the claimed invention's properties and functions, some of which might conceivably be delineated ex post.[50]

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47. *See* Ryan Abbott, *Everything Is Obvious*, 66 UCLA L. REV. 2, 10 (2019) ("Patents are not intended to be granted for incremental inventions. Only inventions which represent a significant advance over existing technology should receive protection."); *see also* 35 U.S.C. § 103 (providing the statutory nexus for the obviousness requirement).

48. 35 U.S.C. § 103 (calling for an assessment of the "differences between the claimed invention and the prior art"). The leading test for obviousness echoes this comparison, but also calls for determinations that are not strictly comparative. Graham v. John Deere Co., 383 U.S. 1, 17–18 (1966) (specifying that obviousness should be analyzed based on the scope of the prior art, the differences between the claimed invention and the prior art, the level of ordinary skill in the art, and so-called "secondary considerations").

49. 35 U.S.C. § 103.

50. *In re* Courtright, 377 F.2d 647, 651 (C.C.P.A. 1967) (acknowledging "that this court has often stated that unexpected or unobvious properties of a composition are part of 'the subject matter as a whole' to be considered under 35 U.S.C. § 103").

On the other side of the comparison lies the prior art, as it does for anticipation.[51] In application, obviousness determinations often closely resemble anticipation determinations in their general methodology. Generally, the decision-maker searches the qualifying prior art for disclosures corresponding to each claim limitation. However, the obviousness analysis differs from the anticipation analysis in that the obviousness analysis permits the decision-maker to disregard qualifying prior art that is deemed nonanalogous.[52] Moreover, the obviousness rule does not require the decision-maker to rely exclusively on a single prior art reference source but instead permits references to be combined, at least where there is some evidence that a PHOSITA would have been motivated to make such a combination.[53] And obviousness determinations may turn on evidence of "secondary considerations" in the form of the commercial success of the invention, the failure of others, or the unexpected results that the invention achieves, among others.[54] Each of these determinations may rest on evidence and arguments that are not well-delineated ex ante.

The presence of these subsidiary rules within the obviousness inquiry may undercut our assertion that obviousness is a relative inquiry, but not very much—and certainly not enough to change the essential character of obviousness as relative. We say this because even if these rules appear to push obviousness away from the confines of a pristine relative inquiry, they each include important limitations that have the effect of pulling the inquiry back to the sort of particularized comparison that we see as typical of relative inquiries. For example, secondary considerations of whether the invention is obvious, such as the invention's commercial success or the failure of others to previously create the claimed invention, are probative only if it has a nexus with the claimed invention.[55] For example, the invention's commercial success must be tied to the inventive nature

51. *See* Tinnus Enters., LLC v. Telebrands Corp., 846 F.3d 1190, 1207 (Fed. Cir. 2017).

52. Corephotonics, Ltd. v. Apple Inc., 84 F.4th 990, 1004 (Fed. Cir. 2023).

53. *See, e.g.*, Elekta Ltd. v. ZAP Surgical Sys., Inc., 81 F.4th 1368, 1374 (Fed. Cir. 2023). *But cf.* KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 415 (2007) (rejecting "rigid" approaches to the motivation-to-combine requirement).

54. *See* Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc., 699 F.3d 1340, 1347, 1349 (Fed. Cir. 2012); *see also* KIMBERLY A. MOORE, TIMOTHY R. HOLBROOK & JOHN F. MURPHY, PATENT LITIGATION AND STRATEGY 710 (5th ed. 2008) (listing seven forms of secondary considerations evidence).

55. Fox Factory, Inc. v. SRAM, LLC, 944 F.3d 1366, 1373 (Fed. Cir. 2019) (ruling that the existence of a nexus may be presumed if the patentee shows that the evidence is tied to a specific product which is coextensive with the claimed invention).

of the product and not merely exceptional marketing.[56] Additionally, the requisite motivation to combine cannot be established merely by invoking "common sense" but must be founded on "reasoned analysis and evidentiary support."[57] We find it intriguing that disputes about how these limitations operate[58] are among the most controversial aspects of the modern obviousness analysis, given that, in our lexicon, they implicate the mixing of absolute and relative inquiries.[59]

B. Identifying the Absolute Grounds of Patentability

In contrast to the relative patentability doctrines, the absolute doctrines are fundamentally different. The comparison is not between two comparators but instead between, at best, one comparator (assuming the courts are true to the patent claim) and a legal standard. Under this framing, utility is clearly abstract. We think that patentable subject matter also falls into the absolute category, even if the courts have alluded to relative aspects of the current test, especially step two of the Supreme Court's methodology.[60] This Subpart elaborates on these categorizations.

1. Utility

A claimed invention must be useful to be patentable under utility patent law.[61] Under our typology, the utility requirement is an absolute ground of patentability. In fact, it is a reasonably clear illustration of such a ground.

Utility issues generally arise in two circumstances: (1) when an invention will never work because, for example, it violates natural laws, like a perpetual motion machine,[62] and (2) when the invention does not presently function although it may in the future, such as

56. Demaco Corp. v. F. Von Langsdorff Licensing Ltd., 851 F.2d 1387, 1392 (Fed. Cir. 1988).

57. Arendi S.A.R.L. v. Apple Inc., 832 F.3d 1355, 1362 (Fed. Cir. 2016).

58. *See, e.g.*, Intercontinental Great Brands LLC v. Kellogg N. Am. Co., 869 F.3d 1336, 1356 (Fed. Cir. 2017) (Reyna, J., dissenting) (2-1 decision disputing whether secondary considerations should be confined to a role rebutting a showing under the primary *Graham* factors).

59. We return to arguments about mixing inquiries in Part III.

60. *See* Alice Corp. v. CLS Bank Int'l, 573 U.S. 208, 217–18 (2014).

61. 35 U.S.C. § 101.

62. *In re* Speas, 273 F. App'x 945, 946 (Fed. Cir. 2008); *see also* Sean B. Seymore, *Making Patents Useful*, 98 MINN. L. REV. 1046, 1098 (2014). The USPTO still requires a model for any case involving perpetual motion. MPEP, *supra* note 7, § 608.03.

cures for male-pattern baldness[63] or cold fusion.[64] The latter circumstance reflects a timing issue: the applicant may have filed too early before the asserted utility has been demonstrated.[65]

The modern cases hold that the utility requirement is satisfied if the claimed subject matter has a credible, substantial, and specific utility.[66] Credible utility reflects the requirement that the PHOSITA would recognize that the invention is operable.[67] Substantial utility is assessed by determining whether the claimed invention "has a significant and presently available benefit to the public," while the requirement for specific utility calls for evidence that the claimed invention "can be used to provide a well-defined and particular benefit to the public."[68] The inquiries are to be undertaken using the perspective of the person having ordinary skill in the art.[69]

The utility inquiry differs inherently from the prior art inquiries characterized above as relative.[70] The utility inquiry does not focus

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63. *In re* Cortright, 165 F.3d 1353, 1357 (Fed. Cir. 1999) ("Treating baldness was once considered an inherently unbelievable undertaking. Since then, however, treatments for baldness have gained acceptance." (citation omitted)); *see* Sean B. Seymore, *Patently Impossible*, 64 VAND. L. REV. 1491, 1516–17 (2011). Michael Risch identifies a third category: incompletely disclosed inventions. Michael Risch, *Reinventing Usefulness*, 2010 BYU L. REV. 1195, 1202 (2010). To us, this category reflects a failure of disclosure and is not due to the nature of the claimed invention itself. We would view this as a disclosure error and not tied to the actual utility of the invention.

64. *In re* Swartz, 232 F.3d 862, 864 (Fed. Cir. 2000).

65. Risch, *supra* note 63, at 1214; Timothy R. Holbrook, *Patent Disclosures and Time*, 69 VAND. L. REV. 1459, 1487 (2016) (arguing that "[t]he utility may be demonstrated after the filing date, but that dynamic suggests that the applicant simply filed too early").

66. Brenner v. Manson, 383 U.S. 519, 534–35 (1966) ("The basic *quid pro quo* contemplated by the Constitution and the Congress for granting a patent monopoly is the benefit derived by the public from an invention with *substantial utility*. Unless and until a process is refined and developed to this point—where *specific benefit exists in currently available form*—there is insufficient justification for permitting an applicant to engross what may prove to be a broad field." (emphasis added)); *In re* Fisher, 421 F.3d 1365, 1371 (Fed. Cir. 2005) (endorsing the *Brenner* test and adding a gloss to it).

67. *In re* '318 Pat. Infringement Litig., 583 F.3d 1317, 1327 (Fed. Cir. 2009); *Cortright*, 165 F.3d at 1356.

68. *Fisher*, 421 F.3d at 1371.

69. Nelson v. Bowler, 626 F.2d 853, 856 (C.C.P.A. 1980) (defining utility as when "one skilled in the art can use a claimed discovery in a manner which provides some immediate benefit to the public").

70. There is no requirement that the invention be superior to the prior art. Lowell v. Lewis, 15 F. Cas. 1018, 1019 (C.C.D. Mass. 1817) (rejecting the proposition that the patented pump must be "a better pump than the common pump" to satisfy the utility requirement); *see also* OPEN-SOURCE CASEBOOK, *supra* note 8, at 258 ("Thus, according to Justice Story, the law does not attempt to measure the *relative* usefulness of an invention for purposes of the utility requirement." (emphasis added)).

on a comparison between a claim and some particularized comparator. Instead, decision-makers test the legal elements of utility against a constellation of facts that may be open-ended—i.e., that may not be identifiable ex ante in the way that resembles the prior art comparison in an anticipation analysis. To be sure, decision-makers routinely resort to the patent disclosure to identify the inventor's assertions of utility, and sometimes they look to the disclosure as the most convenient source of evidence substantiating those assertions.[71] But in our view, the overriding question is whether the invention *had* utility at the time of filing, not whether the patent disclosure adequately articulated (or proved) it.[72]

The leading case *In re Fisher*[73] illustrates how the utility inquiry differs from those that we have identified as relative patentability inquiries.[74] There, the applicant claimed five expressed sequence tags (ESTs)[75] elucidated in research on mapping the corn genome.[76] The Federal Circuit affirmed the USPTO's utility rejection.[77] While the court criticized the assertions of utility in the specification as both generic and hypothetical,[78] the court was not undertaking anything

71. Some decisions arguably go further, seeming to demand that the patent disclosure contain the proof of utility. Irving N. Feit, *Does a Utility that is "Unproved" at the Time of Filing Violate § 112?*, 93 J. PAT. & TRADEMARK OFF. SOC'Y 1, 18 (2011) (arguing that *In re '318 Patent Infringement Litigation* "added a requirement . . . that a specific and substantial utility not only must be identified in the specification as of the filing date, it must be proven" and that "[t]his new requirement . . . directly contradicts earlier . . . decisions"). We regard such a requirement as more appropriate for the § 112(a) inquiries. *See infra* notes 107–38 and accompanying text.

72. So, for example, some cases have pointed out that post-filing evidence of utility is probative so long as it reflects the state of the art as of the time of the filing. *In re* Brana, 51 F.3d 1560, 1567 n.19 (Fed. Cir. 1995) (explaining that it is permissible to rely on an expert declaration dated after the filing date where the declaration pertained to the accuracy of an assertion of utility already in the specification and was being used to address doubts as to the asserted utility); *see also* Sean B. Seymore, *Rethinking Novelty in Patent Law*, 60 DUKE L.J. 919, 941 n.110 (2011) (noting that novelty alone is insufficient and that utility is assessed as of the filing date). For an argument against the use of post-filing evidence, see Holbrook, *supra* note 65, at 1483–98, 1502–06.

73. 421 F.3d 1365 (Fed. Cir. 2005).

74. *Id.* at 1371.

75. ESTs are "short nucleotide sequence[s] that represent[] a fragment of a cDNA [complementary DNA] clone." *Id.* at 1367.

76. *Id.*

77. *Id.*

78. The specification articulated seven different ways that the five claimed ESTs could be used. *Id.* at 1368. The court concluded that specific utility was lacking because any EST could theoretically be put to any of the articulated uses. *Id.* at 1374 ("Nothing about Fisher's seven alleged uses set the five claimed ESTs apart from the more than 32,000 ESTs disclosed in the '643 application or indeed from any EST derived from any organism."). Substantial utility was lacking

resembling a matching exercise between a claim and the disclosure (or any other particularized comparator) as would be the case for a relative inquiry as we have described it. Instead, the analysis incorporated the Court's perceptions of the general state of knowledge about the nature of ESTs and their role as research intermediates in genome mapping.[79] This analysis, then, is absolute—a label that is perhaps imperfect, but one that at least captures our observation that the analysis, however it might be described, is surely something other than relative.

2. Subject Matter Eligibility

Like the utility analysis, the eligible subject matter analysis is an absolute patentability inquiry in our typology. Section 101 of the statute defines patent-eligible subject matter as "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof."[80] To determine whether a claimed invention falls within one of these categories, the courts apply the two-step framework developed by the Supreme Court in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*[81] and *Alice Corp. v. CLS Bank International*.[82] At step one, the decision-maker determines whether the claimed invention is directed to one of the judicially-developed "patent-ineligible concepts,"[83] which include "[l]aws of nature, natural phenomena, and abstract ideas."[84] If the claim is directed to a patent-ineligible concept, the decision-maker proceeds to step two, which calls for determining whether the claim includes any additional elements that "transform the nature of the claim" into patent-eligible subject matter.[85] The Supreme Court has described step two as "a search for an 'inventive concept'—*i.e.*, an element or combination of elements that is 'sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [ineligible concept] itself.'"[86]

These steps—like the judicially-developed test for utility—involve the application of a legal standard to a generally unconstrained set of facts. They do not involve a comparative analysis of the sort that lies at the core of novelty and nonobviousness

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because there was no proof that the claimed ESTs had known functions as of the filing date. *Id.* at 1373.

79. *Id.* (characterizing ESTs as research intermediaries requiring further "scientific research [that] could be performed with no assurance that anything useful will be discovered in the end").

80. 35 U.S.C. § 101.

81. 566 U.S. 66 (2012).

82. 573 U.S. 208 (2014).

83. *Id.* at 217.

84. *Id.* at 216.

85. *Id.* at 217 (quoting *Mayo*, 566 U.S. at 78).

86. *Id.* at 217–18 (alteration in original) (quoting *Mayo*, 566 U.S. at 72–73).

inquiries. Instead, it is an assessment of whether the item claimed falls within the category of things that are patentable. That inquiry depends on the nature of the invention and not on a comparison to things that have come before. In that way, they are absolute, not relative.

The contrast between the relative inquiry into novelty and the absolute nature of the *Alice/Mayo* test is particularly telling. The novelty analysis, as noted,[87] not only entails a rigorous all-element comparison but is also narrowly focused on both sides of the comparison, demanding minute attention to the claim language on the one side and a showing on the other side that the alleged patent-defeating reference satisfies the qualifications for being used as prior art. By contrast, the eligibility inquiry articulated in *Alice/Mayo* lacks any comparative core and lacks the clear points of reference on both sides of the comparison. Courts focus loosely on the language of the claim and seemingly references contained within the patent document itself to assess whether the legal standard has been satisfied.[88]

For example, at *Alice* step one, at least at the motion-to-dismiss stage, courts take considerable liberties with the claims.[89] There is no requirement for a threshold exercise of claim construction,[90] and courts are permitted to base their analyses on the "focus of the claimed advance,"[91] the "basic character"[92] of the claims, or some other equally enigmatic surrogate for the actual claims.[93] The courts rely on these, at best, generalizations of the claims in order to assess

87. *See supra* notes 43–46 and accompanying text.

88. *See infra* notes 91–96 and accompanying text.

89. *Alice*, 573 U.S. at 217.

90. Cleveland Clinic Found. v. True Health Diagnostics LLC, 859 F.3d 1352, 1360 (Fed. Cir. 2017). The Court has countenanced a process that "may well be less than a full, formal claim construction." Aatrix Software, Inc. v. Green Shades Software, Inc., 882 F.3d 1121, 1125 (Fed. Cir. 2018) (citing Genetic Techs. Ltd. v. Merial L.L.C., 818 F.3d 1369, 1373 (Fed. Cir. 2016)).

91. Intell. Ventures I LLC v. Erie Indem. Co., 850 F.3d 1315, 1325 (Fed. Cir. 2017) (quoting Affinity Labs of Tex., LLC v. DirecTV, LLC, 838 F.3d 1253, 1257 (Fed. Cir. 2016)). *But see* Charge-Point, Inc. v. SemaConnect, Inc., 920 F.3d 759, 766 (Fed. Cir. 2019) (emphasizing the role of the claim language in "identifying that focus").

92. Internet Pats. Corp. v. Active Network, Inc., 790 F.3d 1343, 1348 (Fed. Cir. 2015). *But see* Trinity Info Media, LLC v. Covalent, Inc., 72 F.4th 1355, 1361 (Fed. Cir. 2023) (warning against "describing the claims at 'such a high level of abstraction and untethered from the language of the claims' that the claims would be virtually guaranteed to be abstract"); Mayo Collaborative Servs. v. Prometheus Lab'ys, Inc., 566 U.S. 66, 71 (2012) ("The Court has recognized, however, that too broad an interpretation of this exclusionary principle could eviscerate patent law.").

93. *See, e.g.*, *In re* Killian, 45 F.4th 1373, 1379 (Fed. Cir. 2022) (analyzing the "thrust" of the claims).

whether the claim is directed to ineligible subject matter.[94] The guardrails for this threshold analysis have never been fully articulated, and there certainly is no external comparator used in making this determination, which epitomizes an absolute inquiry. Moreover, the Federal Circuit has made clear that, while considering extrinsic evidence—information outside of the patent itself or the patent's prosecution record from the USPTO[95]—is not technically prohibited at step one, there actually is no need to consult with the prior art in making this determination.[96] This elevation of the intrinsic evidence is strong evidence of an absolute form of invalidity.

As for *Alice* step two, while its inventive concept rhetoric superficially evokes a relative inquiry,[97] its application does not bear any resemblance to a novelty or nonobviousness inquiry. In part this is because, when engaging in the search for an inventive concept, courts make no effort to compare the claimed invention to any identifiable, statutorily-constrained discrete set of prior art references.[98] Instead, they appear to operate mainly by intuition, bolstered by loose comparisons to the facts of prior cases and largely conclusory distinctions between specificity and genericness.[99] Moreover, while allegations in the complaint theoretically could

94. *Alice*, 573 U.S. at 217.

95. Extrinsic evidence contrasts with intrinsic evidence. The intrinsic evidence includes the asserted and unasserted claims of the patent at issue, the patent specification, and the prosecution history from the USPTO. Essentially all other evidence is considered extrinsic. *See* Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996).

96. CardioNet, LLC v. InfoBionic, Inc, 955 F.3d 1358, 1372–73 (Fed. Cir. 2020) ("In determining what the claims are directed to and whether they are directed to an abstract idea, a court may well consult the plain claim language, written description, and prosecution history and, from these sources, conclude that the claims are directed to automating a longstanding or fundamental practice. . . . The Court need not consult the prior art to see if, in fact, the assertions of improvement in the patent's written description are true."); *see also id.* at 1375–76 (Dyk, J., dissenting in part and concurring in the result) (arguing that the majority has adopted a rule that excludes the use of extrinsic evidence).

97. Indeed, this injection of relative rhetoric into an absolute inquiry is a source of confusion and is one basis for our critique of the *Alice/Mayo* test, as we explain *infra* notes 141–63 and accompanying text.

98. Synopsys, Inc. v. Mentor Graphics Corp., 839 F.3d 1138, 1151 (Fed. Cir. 2016) ("[T]he contours of what constitutes an inventive concept are far from precise.").

99. *See, e.g.*, BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC, 827 F.3d 1341, 1350, 1352 (Fed. Cir. 2016) (stating that claims that "recite a specific, discrete implementation of the abstract idea" may include an inventive concept, whereas claims to "an abstract idea implemented on generic computer components, without providing a specific technical solution beyond simply using generic computer concepts in a conventional way" will not).

provide evidence of an inventive step,[100] the Federal Circuit quickly retreated from a robust embrace of such an approach, instead emphasizing the intrinsic record and the court's own analysis.[101] Indeed, the Federal Circuit has gone out of its way to insist that the inventive concept inquiry is distinct from both the novelty[102] and nonobviousness assessments.[103]

C. Blended Relative and Absolute Grounds: The § 112(a) Disclosure Doctrines

Unlike the above absolute and relative doctrines, application of our typology, while workable, is not as clear as applied to the written description and enablement doctrines.[104] Although this may seem less

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100. Aatrix Software, Inc. v. Green Shades Software, Inc., 882 F.3d 1121, 1130 (Fed. Cir. 2018).

101. Int'l Bus. Machs. Corp. v. Zillow Grp., Inc., 50 F.4th 1371, 1379 (Fed. Cir. 2022) ("But the district court need not accept a patent owner's conclusory allegations of inventiveness."); Cellspin Soft, Inc. v. Fitbit, Inc., 927 F.3d 1306, 1317 (Fed. Cir. 2019) (noting that "we do not read *Aatrix* to say that any allegation about inventiveness, wholly divorced from the claims or the specification, defeats a motion to dismiss").

102. *Synopsys, Inc.*, 839 F.3d at 1151 ("[A] claim for a *new* abstract idea is still an abstract idea. The search for a § 101 inventive concept is thus distinct from demonstrating § 102 novelty.").

103. Intell. Ventures I LLC v. Symantec Corp., 838 F.3d 1307, 1315 (Fed. Cir. 2016) ("While the claims may not have been anticipated or obvious . . . that does not suggest that the idea . . . is not abstract, much less that its implementation is not routine and conventional."); *see also* CardioNet, LLC v. InfoBionic, Inc., 955 F.3d 1358, 1373 (Fed. Cir. 2020) ("Rather, '[t]he § 101 patent-eligibility inquiry is only a threshold test,' and we reserve for §§ 102 and 103 purposes our comparison of the prior art and the claims to determine if the claims are, in fact, an improvement over the prior art." (quoting Bilski v. Kappos, 561 U.S. 593, 602 (2010))); *In re* Marco Guldenaar Holding B.V., 911 F.3d 1157, 1165 (Fed. Cir. 2018) (Mayer, J., concurring) (arguing that the *Graham v. John Deere* obviousness factors should not be undertaken in an inventive concept inquiry for eligibility). The Federal Circuit has also opined that the inventive concept test does not resurrect the inquiry into "invention" or "inventiveness" used in many cases that preceded the 1952 codification of obviousness. *See, e.g.*, *In re* Killian, 45 F.4th 1373, 1383 (Fed. Cir. 2022) (stating that unlike the leading pre-1952 enunciation of the invention doctrine in Hotchkiss v. Greenwood, 52 U.S. (11 How.) 248, 267 (1850), "our *Alice*/*Mayo* precedent has never required, for an inventive concept inquiry, an examination of whether the 'degree of skill and ingenuity' expressed in the claimed invention is beyond that possessed by one or ordinary skill in the art." (quoting *Hotchkiss*, 52 U.S. (11 How.) at 267)). *But cf.* Interval Licensing LLC v. AOL, Inc., 896 F.3d 1335, 1351 (Fed. Cir. 2018) (Plager, J., concurring in part and dissenting in part) (observing that in 1952 the patent statute was overhauled to place the inventive concept test "into the dustbin of history," and asking "[i]s it the case that now . . . we really have resurrected the concept of an 'inventive concept'?").

104. 35 U.S.C. § 112(a) (describing the written description and enablement requirements). In previous writings, we have argued that § 112(a) does not

satisfactory, it also demonstrates the power of our typology. It provides a new lens and language for interrogating the purposes of these doctrines in a way that has not been explored in the literature until now. So, while the categorization is challenging, it also may be fruitful, as this Subpart explains.

We classify the enablement requirement as a predominantly relative inquiry but one that incorporates a significant component that could reasonably be called absolute. We find that the written description requirement resists easy classification, in part because courts have used a single label—"written description"—to describe at least two distinct functions.[105] Much of the written description requirement seems consistent with absolute inquiries, even though it may deploy some of the language of a relative inquiry. In the end, we tip towards concluding that written description is absolute, with a new suggestion: the written description doctrine ought not to be characterized as a unitary doctrine anyway, assuming that the doctrine is to be recognized at all.[106] Instead, it should be divided into two doctrines: a relative doctrine for policing new matter and priority, and an absolute doctrine for policing claim scope.

1. Enablement

The enablement requirement tests whether the inventor has disclosed sufficient information to teach the PHOSITA how to make and use the claimed invention without "undue experimentation."[107] To satisfy the enablement requirement, the "specification must enable the full scope of the invention as defined by its claims."[108]

Under our typology, the enablement inquiry is fundamentally comparative, albeit not in the same sense as the prior art doctrines.

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impose a separate written description requirement. *See* Janis & Holbrook Amicus Brief in *Juno Therapeutics*, *supra* note 3, at 8; Mark D. Janis, *On Courts Herding Cats: Contending with the "Written Description" Requirement (and Other Unruly Patent Disclosure Doctrines)*, 2 WASH. U. J.L. & POL'Y 55, 61 (2000); Timothy R. Holbrook, *Possession in Patent Law*, 59 SMU L. REV. 123, 162 (2006). But the courts have not accepted these arguments, so we are treating enablement and written description as separate requirements here (grudgingly). A third disclosure requirement, the best mode, also appears on the face of § 112(a), but can no longer be the basis of an invalidity challenge. 35 U.S.C. § 282(b)(3)(a); *see, e.g.*, Lee Petherbridge & Jason Rantanen, *In Memoriam Best Mode*, 64 STAN. L. REV. ONLINE 125, 126 (2012). So we are not addressing the best mode requirement.

105. *See* Janis, *supra* note 104, at 85–86.

106. That is, having argued in past work that the written description doctrine does not exist at all, we are shifting here to the argument that if it does exist, it is actually two doctrines. Some of our scholarly colleagues will surely consider this to be progress.

107. *In re* Wands, 858 F.2d 731, 737 (Fed. Cir. 1988).

108. Amgen Inc. v. Sanofi, 43 S. Ct. 1243, 1254 (2023). For a critique of the *Amgen* decision, see Holbrook & Janis, *supra* note 40, at 87.

While the prior art doctrines entail comparisons between a claim and particularized instances of prior art, the enablement doctrine is comparative in the sense that it requires a comparison between an individual claim and the disclosure in the specification.[109] Courts routinely speak in comparative language when explaining the doctrine.[110]

But the foregoing picture of the enablement analysis is incomplete. Enablement is not merely a simple mandate for explicit, *ipsis verbis* congruence between a claim and the specification. It is a far more subtle comparison that rests not just on the knowledge disclosed expressly in the specification but also on the PHOSITA's ability to engage in reasonable (not undue) experimentation with the expressly disclosed subject matter.[111] The purported purpose of the enablement requirement—to allow competitors to understand the invention during the term and copy it after the patent expires—demonstrates that it is more than merely a tool for measuring or tailoring claim scope vis-a-vis the disclosure.[112]

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109. One could view a relative inquiry as a comparison of the patent document to an external referent, excluding internal comparisons between the claim and the rest of the specification. While this approach has some appeal, given that the prior art relative doctrines involve such a comparison, the basis of comparison for any validity doctrine is the claim itself. *See* Jason Rantanen, *Teva, Nautilus, and Change Without Change,* 18 STAN. TECH. L. REV. 430, 431–32 (2015) ("Almost everything in patent law flows from the claims: infringement, novelty, nonobviousness, and more."). With the claims established as one-half of the relative analysis, then the question becomes what constitutes the other, ex ante, discrete comparator.

110. *See, e.g.*, *Amgen*, 143 S. Ct. at 1254 ("If a patent claims an entire class of processes, machines, manufactures, or compositions of matter, the patent's specification must enable a person skilled in the art to make and use the entire class."); Genentech, Inc. v. Novo Nordisk A/S, 108 F.3d 1361, 1366 (Fed. Cir. 1997) ("It is the specification, not the knowledge of one skilled in the art, that must supply the novel aspects of an invention in order to constitute adequate enablement."). *But see* Timothy R. Holbrook, *Patents, Presumptions, and Public Notice*, 86 IND. L.J. 779, 798 (2011) (arguing *Genentech* is inconsistent with the language of § 112 to the extent that it appears to limit the enablement inquiry only to the expressly disclosed subject matter in the specification).

111. *See, e.g.*, *Amgen*, 143 S. Ct. at 1255 (stating that a specification may provide enabling support for a claim even if the specification requires "a reasonable amount of experimentation to make and use a patented invention"); *Wands*, 858 F.2d at 737 (laying out a factor test for determining "undue experimentation" in the context of an enablement inquiry); *see also In re* Starrett, No. 2022-2209, 2023 WL 3881360, at *4 (Fed. Cir. June 8, 2023) (connecting the "reasonable experimentation" inquiry to the *Wands* factor test for undue experimentation).

112. This assumes that the specification actually performs this teaching function, which some have argued it does not. *See* Holbrook, *supra* note 104, at 139–46; Note, *The Disclosure Function of the Patent System (or Lack Thereof)*, 118 HARV. L. REV. 2007, 2007 (2005). *But see* Sean B. Seymore, *The Teaching*

Whether the undue experimentation test is a relative inquiry is arguable.[113] It necessarily relies upon an analysis of an external baseline: the level of experimentation that would be deemed reasonable. But the inquiry into undue experimentation ordinarily does not call forth evidence that is particularized ex ante. And that may be true more generally about the enablement analysis. For example, in *Amgen Inc. v. Sanofi*,[114] the Court clarified the requirement that the specification enable the full scope of a given claim:

> [This requirement] is not to say a specification always must describe with particularity how to make and use every single embodiment within a claimed class. For instance, it may suffice to give an example (or a few examples) if the specification also discloses "some general quality . . . running through" the class that gives it "a peculiar fitness for the particular purpose." In some cases, disclosing that general quality may reliably enable a [PHOSITA] to make and use all of what is claimed, not merely a subset.[115]

In other ways, however, the enablement inquiry has similarities to an obviousness inquiry, which we classify as relative. For obviousness, the relativity of the analysis is a bit cleaner: the prior art is compared to the claim to determine if the claimed invention effectively was in the prior art. As we acknowledge, however, there are absolutist elements to some of these inquiries. Moreover, the ex ante comparator is the *aggregate* of the prior art, and the decision-maker must assemble those pieces to yield the claimed invention. Enablement operates somewhat similarly: a decision-maker must look at the disclosure of the specification and consider various factors, like those in *In re Wands*,[116] to establish an ex ante baseline of reasonable experimentation.[117] However, the methodology of the undue experimentation inquiry differs from that of obviousness in that the level of experimentation is used to assess the sufficiency of the disclosure in light of the claim language, unlike the direct comparison between prior art and claim that characterizes the obviousness inquiry.

Function of Patents, 85 NOTRE DAME L. REV. 621, 623–25 (2010); Jeanne C. Fromer, *Patent Disclosure*, 94 IOWA L. REV. 539, 542–43 (2009).

113. The inquiry necessarily involves comparing the amount of required experimentation to some baseline. But that is not the claim-to-comparator inquiry that we have previously discussed.

114. 143 S. Ct. 1243 (2023).

115. *Id.* at 1254 (citation omitted) (quoting The Incandescent Lamp Patent, 159 U.S. 465, 475 (1895)).

116. *In re* Wands, 858 F.2d 731, 737 (Fed. Cir. 1988).

117. *Id.*

Accordingly, we see enablement as a blended inquiry. It calls for a comparison between claim and disclosure, which suggests that it could be characterized as predominantly relative. But the undue experimentation assessment mediates the comparison, tipping the inquiry as a whole towards relative with potentially significant absolutist elements.[118]

2. The Written Description Doctrine(s)

Section 112(a)'s inevitably vexing written description doctrine requires (at least in its most common articulation) that inventors show that they possessed the claimed invention as of the relevant filing date, as recognized by the PHOSITA.[119] The Federal Circuit has ruled that the doctrine exists separately from the enablement doctrine while conceding that the two may substantially overlap.[120] To date, the Supreme Court has declined to upset that ruling.[121]

The written description doctrine's chameleonic nature makes its categorization complicated, even more so than enablement. We think, though, that the exploration of its categorization in our typology reveals broader challenges for the doctrine and affords important insights into the debate about its relationship to enablement.[122]

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118. A comment regarding the utility doctrine is in order. We have elsewhere characterized utility as an absolute doctrine, *see supra* Subpart I.B.1, which differs from our characterization of enablement. Some might find this troubling given that the caselaw acknowledges that utility overlaps with the "how to use" element of enablement; one cannot enable a PHOSITA to use something that has no use, the reasoning goes. *See In re* Brana, 51 F.3d 1560, 1564 n.12 (Fed. Cir. 1995) (noting that "the absence of utility can be the basis of a rejection under both" the utility and enablement requirements); *In re* '318 Pat. Infringement Litig., 583 F.3d 1317, 1323 (Fed. Cir. 2009) (stating that utility is "closely related" to enablement). The chief difference we see is that utility does not demand a comparison of the claim to the specification, even though the specification is often resorted to as the most convenient repository of evidence as to utility. To put the point differently, we can imagine claimed inventions whose utility is so self-evident that the existence of utility could be inferred from the claim language alone, even if the applicant filed no supporting disclosure. We have more difficulty hypothesizing an invention that should be deemed self-enabling based solely on the words of a claim.

119. Ariad Pharms., Inc. v. Eli Lilly & Co., 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc); *In re* Kaslow, 707 F.2d 1366, 1375 (Fed. Cir. 1983).

120. *Ariad*, 598 F.3d at 1352 (asserting that "although written description and enablement often rise and fall together, requiring a written description of the invention plays a vital role in curtailing claims that do not require undue experimentation to make and use, and thus satisfy enablement, but that have not been invented, and thus cannot be described").

121. Juno Therapeutics, Inc. v. Kite Pharma, Inc., 142 S. Ct. 402, 402 (2022) (mem.) (denying certiorari).

122. We do think that the relative/absolute vocabulary provides insights for the debate about the relationship between the enablement and written description doctrines. *See infra* Subpart III.B.

At first glance, the written description requirement purports to rest on a comparison between a claim and the four corners of the disclosure[123]—a characteristic of a relative inquiry, at least in the sense that we discussed in connection with the enablement requirement. A court looks at the claim and compares it to the scope of the patent disclosure to see if the applicant has demonstrated possession of the invention.[124] But it can be difficult to discern any rigorous comparison in many of the Federal Circuit's written description opinions, especially with a concerted focus on the language of the claim.[125] Indeed, the court sometimes seems to speak of the test for the written description requirement in language akin to an undue experimentation test.[126] At other times, however, the court seems to focus on the functional language of the claim, not necessarily the claim as a whole, when determining whether the written description requirement is satisfied.[127]

Such concerns of overbreadth harken to another absolute inquiry: subject matter eligibility.[128] While courts may not offer the generalized description of the claims as is seen in step one of the *Alice/Mayo* inquiry, courts in written description cases also seem more concerned with aspects of the claim instead of the claim as a whole.[129] Following this path, courts sometimes leverage the written

123. *Ariad*, 598 F.3d at 1351 (stating that "the test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art"); Holbrook, *supra* note 110, at 796 (noting that the Federal Circuit "rarely, if ever, ventures outside the four corners of the patent document to account for the PHOSITA's perspective" in its written description jurisprudence).

124. *Ariad*, 598 F.3d at 1353–54.

125. *See id*. at 1342.

126. *Id*. at 1351 (quoting Capon v. Eschar, 418 F.3d 1349, 1357–59 (Fed. Cir. 2005)) (describing how "the level of detail required to satisfy the written description requirement varies depend on the nature and scope of the claims and on the complexity and predictability of the relevant technology" while providing a factor analysis reminiscent of the *Wands* factors); PureCircle USA Inc. v. SweeGen, Inc., No. 2022-1946, 2024 WL 20567, at *3 (Fed. Cir. Jan. 2, 2024) (explicitly using the language of experimentation in a written description analysis; observing that "extensive trial and error testing . . . would be required to identify potential active candidates" for use in the claimed invention and that "[i]n general the need for extensive trial and error testing argues against a finding of adequate written description").

127. *Ariad*, 598 F.3d at 1349 ("The problem is especially acute with genus claims that use functional language to define the boundaries of a claimed genus.").

128. *See supra* notes 90–91 and accompanying text.

129. This comparison is not terribly surprising given that one justification for subject matter limits is the fear that a patent will preempt downstream uses of the claimed law of nature, natural phenomena, or abstract idea. *See* Alice Corp. v. CLS Bank Int'l, 573 U.S. 208, 216 (2014) ("We have described the concern that drives this exclusionary principle as one of pre-emption.").

description requirement to invalidate claims believed to be too broad.[130]

Further complicating matters, the written description requirement crops up in two quite different settings: policing priority if an applicant claims the benefit of the filing date of an earlier-filed application[131] and ensuring the patent's claim scope is adequately supported by the specification, especially where the claim relies on functional limitations.[132] When determining whether an applicant or patentee can claim the benefit of an earlier filing date, the analysis is more cleanly relative. The claim is compared to a discrete, ex ante comparator: an earlier application. The legal standard is that "the disclosure of the earlier application, the parent, must reasonably convey to one of skill in the art that the inventor possessed the later-claimed subject matter at the time the parent application was filed."[133] For example, in *Tronzo v. Biomet, Inc.*,[134] the Federal Circuit confronted a patent that claimed a cup for a hip implant that was generic as to its shape.[135] In light of intervening, invalidating prior art, the Federal Circuit had to determine whether there was adequate support for the generic claim in an earlier filed application that disclosed only a single cone-shape for the cup.[136] The court, consulting the claims and specification of the earlier patent—one referent—held that the generic claim—the other referent—lacked support in the earlier application.[137] Because the patent was not entitled to the earlier filing date, the intervening prior art invalidated the claims.[138]

At bottom, we view the written description requirement as being pretty much whatever the courts, especially the Federal Circuit, wish it to be. We think it right to say that the doctrine has the pretensions of a relative inquiry, but we question whether the doctrine actually operates that way. Unlike other patentability doctrines, if there is anything inherent about the written description doctrine as presently formulated that demands it to be characterized as either relative or absolute, we are hard-pressed to find it. We regard it as a blended inquiry, though one that leans towards being absolute given the "we know it when we see it" quality with which the Federal Circuit has

130. *See, e.g.*, Novartis Pharms. Corp. v. Accord Healthcare, Inc., 38 F.4th 1013, 1018–20 (Fed. Cir. 2022).

131. Lockwood v. Am. Airlines, Inc., 107 F.3d 1565, 1571 (Fed. Cir. 1997); Vas-Cath Inc. v. Mahurkar, 935 F.2d 1555, 1559 (Fed. Cir. 1991).

132. Regents of the Univ. of Cal. v. Eli Lilly & Co., 119 F.3d 1559, 1566 (Fed. Cir. 1997).

133. Tronzo v. Biomet, Inc., 156 F.3d 1154, 1158 (Fed. Cir. 1998) (citing *Vas-Cath*, 935 F.2d at 1563).

134. 156 F.3d 1154 (Fed. Cir. 1998).

135. *Id.* at 1158.

136. *Id.* 1159.

137. *Id.* at 1160.

138. *Id.*

imbued it. Here, the typology primarily impels us to think that the written description requirement ought to be reformulated along the lines of its disparate functions. We take this up *infra* in Subpart III.B, exploring both the internal dynamics of the written description requirement and its relationship with the enablement requirement.

III. USING THE RELATIVE/ABSOLUTE TYPOLOGY TO REFRAME DEBATES OVER PATENTABILITY RULES

The above analysis shows the insights that can be drawn using the relative/absolute typology and, more importantly, reveals that today's most controversial doctrines are those that fall within the gray areas of the typology, usually because the doctrines have incorporated elements of both. The relative/absolute typology thus suggests a normative principle: there should be a presumption against the use of any test for patentability that (purportedly or actually) mixes relative and absolute inquiries. We view blended tests as intrinsically suspect because they may be challenging, costly to administer, and insufficiently transparent—in particular, too apt to be used as subterfuges for largely unfettered discretionary decision-making. Allowing decision-makers, especially courts, to cherry-pick from the respective categories also impairs predictability. In accord with this view, courts should adopt blended tests for patentability only when close scrutiny reveals a compelling rationale for doing so.[139]

This normative principle deserves a more detailed elaboration—and, we suspect, a more full-throated defense against potential objections—than we provide here. In this Article, we opt to focus on a few practical applications of the principle, leaving for later work the more abstract policy analysis. Below, we consider two such applications: eligibility reform and the debate over the written description requirement.[140]

A. New Framework for the Debate over Patent Eligibility Reform

The massive fracture in the patent community over the *Alice/Mayo* eligibility test is so well-documented that we need not recount it at length here.[141] The substantive arguments are now

139. It appears that European trademark law shares this skepticism about mixing relative and absolute inquiries, although we should reiterate that our definitions of the inquiries (especially the relative inquiry) depart from the European notion in some important respects.

140. We are not attempting to be exhaustive. We have shown, *supra* Part II, that some mixing of relative and absolute inquiries occurs in other doctrines—such as obviousness, in which some secondary considerations are arguably absolute inquiries. We think that the structure of the obviousness inquiry, and the use of the nexus requirement, supplies the rationale for tolerating some mixing here.

141. For citations to just some of the relevant work, see Kevin Collins, *Patent-Ineligibility as Counteraction*, 94 WASH. U. L. REV. 955, 958 n.6 (2017).

familiar: many argue that the test is too difficult to administer, duplicative of other patentability inquiries (especially nonobviousness), erodes innovation incentives (especially in the medical diagnostics field), and places U.S. companies at a competitive disadvantage for innovation in areas of emerging technology.[142] By contrast, others argue that the *Alice/Mayo* test allows for a quick first look at patentability,[143] is more predictable than its detractors admit (at least for software inventions),[144] and should be deployed as a major policy instrument,[145] which presumably could extend to debates over prescription drug costs and curb assertions of "non-technological" patents by non-practicing entities.[146]

142. *See, e.g.*, David O. Taylor, *Confusing Patent Eligibility*, 84 TENN. L. REV. 157, 158–64 (2016) (laying out several of these arguments); Timothy R, Holbrook & Mark D. Janis, *Patent-Eligible Processes: An Audience Perspective*, 17 VAND. J. ENT. & TECH. L. 349, 358 (2015). In addition, the inventive concept test has been criticized on historical grounds. Jeffrey A. Lefstin, *Inventive Application: A History*, 67 FLA. L. REV. 565, 569–70 (2015) (asserting that the early cases distinguished between principles and their application, not principles and the inventiveness of their application). A recent study suggests the impact has had a mixed, albeit generally negative, impact on patents for molecular diagnostics. *See* Colleen Chien et al., *Molecular Diagnostic Patenting After* Mayo v. Prometheus*: An Empirical Analysis*, 23 J. EMPIRICAL LEGAL STUD. (forthcoming 2025) (manuscript at 5), https://ssrn.com/abstract=4648623.

143. *See, e.g.*, Paul R. Gugliuzza, *Quick Decisions in Patent Cases*, 106 GEO. L.J. 619, 663 (2018) (asserting that "eligibility provides a mechanism to dismiss low-merit suits before the parties incur significant litigation costs" and that this is an "important but underappreciated benefit of the doctrine").

144. Nikola L. Datzov & Jason Rantanen, *Predictable Unpredictability*, IOWA L. REV. (forthcoming 2024) (manuscript at 2), https://ssrn.com/abstract=4380434 (arguing that "the popular narrative that § 101 and the *Mayo/Alice* framework cannot be predictably applied, particularly by judges" is a "misconception").

145. Amy L. Landers, *Patentable Subject Matter as a Policy Driver*, 53 HOUS. L. REV. 505, 507 (2015) (arguing that § 101 eligibility should be tethered explicitly to a set of specified policy guideposts).

146. *Cf.* Charles Duan, *Gene Patents, Drug Prices, and Scientific Research: Unexpected Effects of Recently Proposed Patent Eligibility Legislation*, 24 MARQ. INTELL. PROP. L. REV. 139, 153–58 (2020) (expressing concern that proposed legislation to liberalize patentable subject matter will raise drug prices); Robin Feldman, *Perverse Incentives: Why Everyone Prefers High Drug Prices-Except for Those Who Pay the Bills*, 57 HARV. J. ON LEGIS. 303, 374–75 (2020) (arguing for using patentable subject matter to limit drug patents to a "one and done" approach to reduce prices). *But cf.* Mark A. Lemley & Samantha Zyontz, *Does* Alice *Target Patent Trolls?*, 18 J. EMPIRICAL LEGAL STUD. 47, 48 (2021) (demonstrating that individual inventors and their start-ups fare worse under *Alice* than do non-practicing entities).

At present, the debate has reached an impasse.[147] The Supreme Court has declined to revisit the test in several high-profile cases,[148] notwithstanding multiple recommendations from the Solicitor General[149] and pleas from Federal Circuit judges.[150] Congress held extensive hearings in 2019,[151] followed by legislative proposals and discussion drafts that would walk back the *Alice/Mayo* approach.[152] Still, there is no current indication that any of these proposals will become law. In addition, the USPTO has implemented extensive

147. *See* Collins, *supra* note 141, at 958 & n.6. Admittedly, this word choice betrays our normative leanings. If we were fans of *Alice/Mayo*, we might say that the debate has demonstrated that the test has remarkable resilience.

148. *See, e.g.*, CareDx, Inc. v. Natera, Inc., 144 S. Ct. 248 (2023) (mem.); Am. Axle & Mfg., Inc. v. Neapco Holdings, LLC, 142 S. Ct. 2902 (2022) (mem.) (denying certiorari); Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC, 140 S. Ct. 855 (2020) (mem.) (same).

149. *See, e.g.*, Brief for the United States as Amici Curiae at 23, Interactive Wearables, LLC v. Polar Electro Oy, No. 21-1281 (Fed. Cir. Apr. 5, 2023) [hereinafter Brief for the United States in *Interactive Wearables*] (recommending the grant of petitions in both cases); Brief for the United States as Amicus Curiae at 22, Am. Axle & Mfg., Inc. v. Neapco Holdings LLC, No. 20-891 (Fed. Cir. May 24, 2022); *see also* Paul R. Gugliuzza & Pyry P. Koivula, *Stepping Out of the Solicitor General's Shadow: The Federal Circuit and the Supreme Court in a New Era of Patent Law*, 64 B.C. L. REV. 459, 515 (2023) (suggesting that patent law has entered a new era of "diminished influence of the Solicitor General").

150. *See* Athena Diagnostics, Inc. v. Mayo Collaborative Servs., LLC, 927 F.3d 1333 (Fed. Cir. 2019) (denying petition for rehearing en banc, the denial accompanied by a set of opinions in which each opinion writer found fault with some aspects of *Alice/Mayo*); Interval Licensing LLC v. AOL, Inc., 896 F.3d 1335, 1348 (Fed. Cir. 2018) (Plager, J., concurring in part and dissenting in part) (arguing that the law "renders it near impossible to know with any certainty whether the invention is or is not patent eligible" and objecting to "our court's continued application of this incoherent body of doctrine"); Berkheimer v. HP Inc., 890 F.3d 1369, 1374 (Fed. Cir. 2018) (en banc) (Lourie, J., concurring) (asserting that "the law needs clarification by higher authority, perhaps by Congress, to work its way out of what so many in the innovation field consider are § 101 problems").

151. *The State of Patent Eligibility in America: Part I: Hearing Before the Subcomm. on Intell. Prop. of the S. Comm. on the Judiciary*, 116th Cong. (June 4, 2019), https://www.judiciary.senate.gov/committee-activity/hearings/the-state-of-patent-eligibility-in-america-part-i; *The State of Patent Eligibility in America: Part II: Hearing Before the Subcomm. on Intell. Prop. of the S. Comm. on the Judiciary*, 116th Cong. (June 5, 2019), https://www.judiciary.senate.gov/committee-activity/hearings/the-state-of-patent-eligibility-in-america-part-ii; *The State of Patent Eligibility in America: Part III: Hearing Before the Subcomm. on Intell. Prop. of the S. Comm. on the Judiciary*, 116th Cong. (June 11, 2019), https://www.judiciary.senate.gov/committee-activity/hearings/the-state-of-patent-eligibility-in-america-part-iii.

152. *See* Patent Eligibility Restoration Act of 2023, S. 2140, 118th Cong. (2023); Patent Eligibility Restoration Act of 2022, S. 4734, 117th Cong. (2022).

guidance on the application of *Alice/Mayo*,[153] but the Federal Circuit has noted that the guidance is not binding and cannot supplant Federal Circuit or Supreme Court law.[154] Conspicuously, that guidance recognizes the confused state of the law surrounding patent-eligible subject matter.[155]

The relative/absolute typology supplies a new way of framing the eligibility debate, especially as it concerns *Alice/Mayo* step two. As we have seen, the eligibility analysis is an absolute inquiry, but the *Alice/Mayo* test mixes in the rhetoric of a relative inquiry through the step two inventive concept test.[156] As a mixed test, *Alice/Mayo* is suspect under the normative principle we have advocated.

Moreover, we do not see a compelling rationale for tolerating a blended test. Experience with *Alice/Mayo* suggests the opposite. The rhetoric of a relative inquiry in *Alice/Mayo* step two is misleading, given that courts applying the inventive concept analysis are not actually undertaking a relative inquiry.[157] In fact, they are defining *post hoc* what constitutes the body of "well-understood, routine, and conventional" activity without apparent guardrails constraining judicial discretion,[158] just the sort of behavior that makes blended tests generally problematic.

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153. *See* 2019 Revised Patent Subject Matter Eligibility Guidance, 84 Fed. Reg. 50 (Jan. 7, 2019) [hereinafter USPTO January 2019 Guidance]; October 2019 Patent Eligibility Guidance Update, 84 Fed. Reg. 55942 (Oct. 18, 2019); *see also* Brendan Costello, Note, *Rulemaking § 101*, 129 YALE L.J. 2178, 2210–11, 2226–29 (2020) (chronicling the USPTO's use of subject matter eligibility guidance and arguing that the guidance resembles substantive rulemaking that may violate the Administrative Procedure Act).

154. *In re* Rudy, 956 F.3d 1379, 1383 (Fed. Cir. 2020).

155. USPTO January 2019 Guidance, *supra* note 153 ("Properly applying the *Alice/Mayo* test in a consistent manner has proven to be difficult, and has caused uncertainty in this area of the law.").

156. *See supra* notes 98–104 and accompanying text.

157. *See supra* notes 98–104 and accompanying text; *see also* Holbrook & Janis, *supra* note 142, at 379 ("It seems apparent from the passages in *Mayo* and *Alice* that the 'inventive concept' inquiry permits courts to undertake a quasi-Section 102 and 103 analysis for patentability over the prior art, without the need to qualify any single piece of evidence as prior art or consult the immense jurisprudence of Sections 102 or 103.").

158. Holbrook & Janis, *supra* note 142, at 382–83 (arguing that incorporating inventive concept into the eligibility analysis "entitles a court to kick the hypothetical person of ordinary skill in the art to the curb in favor of a discretionary analysis that need not be constrained by the need to establish qualifying prior art evidence, by the need to develop doctrinal checks against judicial hindsight, or by any of the other innovations that have been developed in over two hundred years of American jurisprudence on patentability over the prior art"); *see also* David O. Taylor, *Amending Patent Eligibility*, 50 U.C. DAVIS L. REV. 2149, 2196–97 (2017) (urging that § 101 be amended to restore the perspective of the person of ordinary skill at the time of the application).

Thus, the relative/absolute typology provides a new way of framing a familiar argument against using the analysis in step two of the *Alice/Mayo* eligibility framework. It reinforces the argument that the Court was unwise to have adopted the "inventive concept" label in the first place.[159] We favor expunging that rhetoric from eligibility analysis.[160] As a point of contrast, the position argued by the Solicitor General—that step two should assess "whether a claimed invention sufficiently transforms an abstract idea into the *kind* of innovation eligible for patent protection"[161]—would expressly reflect a shift from a relative inquiry to an absolute one by focusing on the claimed invention and dropping the pretext that the inquiry is investigating the body of statutorily-recognized prior art.

The limitations of our argument are apparent. Our argument does not address whether to abolish judicial exceptions to subject matter eligibility altogether, a common feature of legislative reform proposals.[162] In addition, we recognize that our argument for ridding the eligibility test of the inventive concept inquiry rests both on adopting our typology *and* the normative principle that our typology suggests. As always, there are opposing arguments worth considering. Some might contest our normative principle. Others might contest our application of that principle—arguing, for example, that a blended test for eligibility is justifiable because the prior art doctrines are so profoundly deficient in carrying out the patent system's goals.[163] We are not persuaded, but our larger point is that the relative/absolute typology provides a useful framework for making the pertinent arguments on both sides of the question. We think this is no small matter; finding a common vocabulary for the eligibility debate has been difficult.

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159. *See* Taylor, *supra* note 158, at 2156.

160. Perhaps this line of reasoning will also inspire new approaches to drafting eligibility reform legislation that relies affirmatively on the relative/absolute typology to avoid the need to use statutory language that attempts to forbid consideration of the inventive concept in eligibility analysis. *See, e.g.*, Patent Eligibility Restoration Act of 2023, S. 2140, 118th Cong. § 101(c)(1)(B) (2023) (specifying that eligibility be assessed "without regard to" various considerations); Taylor, *supra* note 158, at 2206 (advocating the use of "negative statutory language" stating that "eligibility law no longer includes a search for an 'inventive concept'").

161. Brief for the United States in *Interactive Wearables*, *supra* note 149, at 11.

162. *See, e.g.*, S. 2140, 118th Cong. § 101(a) (2023)*; cf.* Timothy R. Holbrook & Mark D. Janis, *Expressive Eligibility*, 5 U.C. IRVINE L. REV. 973, 999 (2015) (criticizing eligibility tests but arguing that the judicial exceptions might be worth retaining for their expressive value).

163. Collins, *supra* note 141, at 959; Masur & Ouellette, *supra* note 41, at 705–07; Camilla A. Hrdy & Sharon Sandeen, *The Trade Secrecy Standard for Patent Prior Art*, 70 AM. U. L. REV. 1269, 1272–73 (2021).

B. A New Perspective on the Enablement/Written Description Debate

Our typology may also offer some insight into the debate over the relationship between the enablement and written description requirements. As with eligibility, how that debate advances may depend on whether one subscribes to the anti-mixing normative position that we previously discussed.

We described the enablement requirement as blended: arguably a relative inquiry, with aspects that seem better characterized as absolute. We also suggested that the written description requirement defies easy characterization, especially when its distinct functions of policing priority and cabining claim scope are considered. Collectively, the two doctrines are profoundly blended, which strikes us as relevant because the doctrines are often argued together. Perhaps it is worthwhile simply observing that we ought not to be surprised that the relationship between the doctrines and some aspects of each doctrine individually have been controversial in the modern patent system.

What, if anything, should be done about it? Our typology could be used to formulate several arguments. We will confine ourselves to two. First, the written description doctrine should be divided into separate and distinct doctrines along relative/absolute lines. Second, the Federal Circuit should wean itself away from the full-scope rhetoric of the enablement doctrine.

Regarding the first argument, the relative/absolute typology helps us highlight how different the two instantiations of the written description requirement are. When the written description requirement is used as a priority policing mechanism for later-added claims, the inquiry bears at least some resemblance to a relative inquiry because the decision-maker is necessarily performing a relative exercise: comparing the claims of a later-filed application to see if there is adequate support in the earlier-filed application to justify affording the claims the filing date of the earlier application.[164] But when the written description requirement is used to police the scope of genus claims containing functional limitations—even when those claims were present in the application as filed—it is less clear that the decision-maker is engaged in a predominantly comparative exercise using defined referents.[165] While the court often maintains

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164. *See, e.g.*, Tronzo v. Biomet, Inc., 156 F.3d 1154, 1158–59 (Fed. Cir. 1998) (comparing the specification of the earlier application to the claimed invention); Lockwood v. Am. Airlines, Inc., 107 F.3d 1565, 1571–72 (Fed. Cir. 1997). The filing date is critical if prior art that would defeat the later claims arises during the interval between the earlier and later filing dates. *See Tronzo*, 156 F.3d at 1160 (invalidating claims based on intervening prior art because the claim was not supported by the earlier filed application).

165. *See* Janice M. Mueller, *The Evolving Application of the Written Description Requirement to Biotechnological Inventions*, 13 BERKELEY TECH. L.J.

that it is using the words of the specification as an anchor in this context, it often seems to rely on concepts that are not amenable to crisp ex ante definition, such as how many species of a genus would need to be disclosed to amount to a "representative number" that would allow a PHOSITA to "visualize or recognize the members of the genus,"[166] or other considerations reminiscent of the undue experimentation test. We wonder whether a better approach would be to subdivide (and rename) the doctrine in accordance with these distinct functions.[167]

As for the second argument, the relative/absolute typology reveals a dissonance in current articulations of enablement doctrine. The rhetoric of "full scope" enablement seems to appeal to a type of relative patentability inquiry (if a comparison between a claim and written description is fairly characterized as relative). However, the undue experimentation test is more blended. Although the Supreme Court endorsed both aspects of the doctrine in *Amgen*, we think that the internal tension in the doctrine is palpable, and we wonder whether enablement can function effectively while wearing both hats at the same time.[168] One way forward would be for the Federal Circuit to wean itself away from the "full scope" terminology, which we believe the Court could do without violence to the *Amgen* opinion. Such an embrace—and clearer differentiation from written description—could have the added benefit of allowing courts to focus on the teaching function of patent law, ensuring the application's content more readily informs others how to practice the invention.[169]

These comments illustrate the use of the relative/absolute typology to frame arguments about restructuring important patent doctrines. They are not meant to suggest that the use of the typology by itself resolves debates over those doctrines, but rather that the typology provides both a new vocabulary and functional distinctions that can advance the debates.[170]

615, 633 (1998); *cf.* Ariad Pharms., Inc. v. Eli Lilly & Co., 598 F.3d 1336, 1349 (Fed. Cir. 2010).

166. *Id.* at 1350.

167. Janis, *supra* note 104, at 64 (connecting the written description analysis to the new matter requirement of § 132).

168. *See* Amgen Inc. v. Sanofi, Aventisub LLC, 987 F.3d 1080, 1087 (Fed. Cir. 2021).

169. *See* Holbrook & Janis, *supra* note 40, at 96–97.

170. Nor would we say that these arguments about reformulating § 112(a) doctrines exhaust all possibilities that the relative/absolute typology might suggest. For example, we can easily imagine a proponent of a separate written description requirement arguing that enablement is relative, written description is absolute, and that this neatly explains why we have the two doctrines. We will leave that argument to others.

IV. RETHINKING THE SCOPE OF EX PARTE PATENT EXAMINATION BASED ON THE RELATIVE/ABSOLUTE TYPOLOGY

The relative/absolute typology prompts a further question about institutional arrangements: Why should the USPTO be tasked with examining patent applications for compliance with all patentability requirements, irrespective of whether those requirements would qualify as absolute or relative? This is a fundamental question of institutional choice, calling for a reappraisal of the structure of ex parte examination and the nature of the USPTO's expertise. The relative/absolute typology offers a fresh lens through which to reexamine long-held beliefs—and concomitant design choices—about the attributes of patent prosecution practice.

This question of differentiating among patentability doctrines in setting the optimal scope of substantive ex parte patent examination has received scant attention in patent policy debates, even though the patent statute has taken dramatically different approaches to patent examination over time. In the first patent statute (1790),[171] Congress provided for patent examination by high-level federal government officials, then dropped the examination requirement altogether three years later,[172] only to reinstate it for good in 1836.[173] Strikingly, the debate over these profound shifts seems to have been framed solely as a binary choice between examination on *all* substantive patentability grounds or examination on *none* of them.[174] We find nothing in the historical record to suggest that Congress distinguished between patentability requirements that might be well-suited to substantive examination and those that might be ill-suited.

That pattern of simply assuming that examination must be directed to all patentability requirements seems to have persisted into the modern patent system. The current USPTO regulation specifies that examination must be "complete" with respect to the patentability requirements,[175] in accordance with practices now over

171. Patent Act of 1790, ch. 7, 1 Stat. 109 (providing for examination by the Secretary of State, Secretary of War, and the Attorney General).

172. Patent Act of 1793, ch. 11, 1 Stat. 318. Congress's rationale for dropping the examination requirement is unclear. *See* Edward C. Walterscheid, *To Promote the Progress of Useful Arts: American Patent Law and Administration, 1787-1836 (Part I)*, 79 J. PAT. & TRADEMARK OFF. SOC'Y 61, 73 (1997) (speculating that Congress considered the original examination system too administratively burdensome).

173. Patent Act of 1836, ch. 357, 5 Stat. 117; S. COMM. REP. NO. 24-338 (1836), *reprinted in* 18 J. PAT. OFF. SOC'Y 853 (1936). Most sources cite severe problems of patent quality—or, less euphemistically, outright fraud—as the chief rationale for reinstating the examination requirement. *See, e.g.*, KENNETH W. DOBYNS, THE PATENT OFFICE PONY: A HISTORY OF THE EARLY PATENT OFFICE 97 (1994) (referring to "frauds . . . openly practiced on the patent system" under the 1793 Act).

174. *See* Walterscheid, *supra* note 172, at 71–74.

175. 37 C.F.R. § 1.104(a)(1) (2023) (stating that "[t]he examination shall be complete with respect both to compliance of the application . . . with the

a century-and-a-half old.[176] But the modern patent statute does not explicitly mandate examination on all patentability grounds (although such examination is surely consistent with the statute).[177] Nor do we find discussions of the issue at other critical inflection points in the history of U.S. patent legislation. It seems to have been absent from debates over the codification of the nonobviousness requirement in the 1952 Act.[178] Likewise, it did not surface in debates leading to the enactment of the America Invents Act in 2011, even though limitations on the substantive patentability issues that could be raised in post-grant administrative proceedings were a point of controversy.[179] Similarly, contemporary commentators who have called for reforming the examination system[180] or returning to a registration scheme[181] have appeared to assume that the alternative is examination on all grounds.

In this Part, we dispense with the long-held implicit assumption that ex parte examination should (or must) address every patentability condition. The relative/absolute typology teaches against treating the set of patentability conditions as a monolith. Aided by this insight, we take a fresh look at how the patentability conditions operate in the context of modern ex parte proceedings. We find reasons to doubt whether *absolute* patentability inquiries can be adjudicated effectively in ex parte proceedings due partly to structural impediments innate in those proceedings. Relative patentability inquiries are capable of faring better. After establishing

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applicable statutes and rules and to the patentability of the invention as claimed").

176. *See, e.g.*, *Ex parte* Noyes, 1870 Dec. Comm'r Pat. 63 (relying on a lack-of-invention rationale to sustain a rejection); *Ex parte* Baldwin, 1870 Dec. Comm'r Pat. 50 (same).

177. *See* 35 U.S.C. § 131 (requiring the USPTO Director to "cause an examination to be made" and to issue a patent "if on such examination it appears that the applicant is entitled to a patent under the law"). The logic of the statute does not dictate that the patentability conditions be treated as a monolith in all contexts. *See, e.g.*, *id.* § 282(b)(3)(A) (excluding the best mode requirement as a permissible basis for asserting invalidity or petitioning for cancellation).

178. *See* P.J. Federico, *Commentary on the New Patent Act*, 75 J. PAT. & TRADEMARK OFF. SOC'Y 161, 166–70 (1993).

179. H.R. REP. NO. 112-98, pt. 1, at 47–48 (2011); *see also* Joe Matal, *A Guide to the Legislative History of the America Invents Act: Part II of II*, 21 FED. CIR. B.J. 539, 598–623 (2012).

180. *See* Nancy J. Linck et al., *A New Patent Examination System for the New Millennium,* 35 HOUS. L. REV. 305, 307 (1998) ("In spite of its long, successful history, the present patent examination system will need to change dramatically in the new millennium in order to maintain the current level of high quality examination at a reasonable cost.").

181. *See* F. Scott Kieff, *The Case for Registering Patents and the Law and Economics of Present Patent-Obtaining Rules*, 45 B.C. L. REV. 55, 59 (2003) ("[T]his Article offers as a model a hypothetical alternative system under which patent applications are registered, not examined.").

those points, we propose eliminating ex parte examination for absolute patentability inquiries. We consider various implementation issues and respond to anticipated objections relating to patent quality concerns.

A. Is Ex Parte Examination Inherently Unsuited for Assessing Compliance with Absolute Patentability Inquiries?

We begin with the utility requirement, which presents the weakest case for retaining the current practice of comprehensive ex parte examination. We then turn to ex parte examination for compliance with eligible subject matter and § 112(a) requirements, where our arguments may have more far-ranging practical implications.

1. Examining Utility

Scholars have long debated the utility requirement's role in advancing the policy goals of the patent system.[182] Some have proposed a "de minimis interpretation" that would largely discard the requirement.[183] Others would expand the doctrine.[184] However, when the focus is narrowed to the context of ex parte examination, critics and advocates alike have acknowledged a fundamental asymmetry problem in the application of the utility doctrine. This asymmetry problem is an important driver of our skepticism about devoting USPTO resources to examining utility, and, by extension, other absolute patentability inquiries.

In examining an application for compliance with the utility requirement, the Manual of Patent Examining Procedure (MPEP) instructs examiners to "determine if the applicant has asserted for the claimed invention any specific and substantial utility that is credible,"[185] where credibility is to be assessed by "evaluating the logic

182. *See, e.g.*, Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1646 (2003) (identifying the utility doctrine as a "macro policy lever" that is "expressly framed in policy terms" and applies differentially to different categories of subject matter); Edmund W. Kitch, *The Nature and Function of the Patent System*, 20 J.L. & ECON. 265, 270 n.21 (1977) (criticizing *Brenner* as "at variance with this tradition but has had little impact on patent practice").

183. Seymore, *supra* note 63, at 1081. Professor Seymore argues that the requirement is subjective, biased against some types of subject matter, and superfluous in view of doctrines such as enablement and obviousness. *Id.* at 1050–51; *see also* Sean B. Seymore, *The Research Patent*, 74 VAND. L. REV. 143, 149–61 (2021) (reiterating these critiques).

184. Risch, *supra* note 63, at 1240–41 (arguing for a two-prong commercial utility test that would require evidence showing that (1) "there is a market for the invention," and (2) "the invention can be manufactured at a cost sufficient to fulfill market demand").

185. MPEP, *supra* note 7, § 2107(II)(B).

of the statements made, taking into consideration any evidence cited by the applicant."[186] That evidence may include "test data, affidavits or declarations from experts in the art, patents or printed publications."[187] If an examiner rejects a claim for lack of utility, the applicant may offer, among other things, "new evidence submitted in an affidavit or declaration under 37 CFR 1.132."[188]

The asymmetry problem arises due to the structural limitations of ex parte examination.[189] Examiners do not have access to their own test facilities, nor do they have experts to verify applicant assertions about utility or to develop contrary facts supporting a conclusion of no utility.[190] Indeed, the MPEP instructs examiners that they "must treat as true a statement of fact made by an applicant in relation to an asserted utility, unless countervailing evidence can be provided."[191] Likewise, examiners "must accept an opinion from a qualified expert that is based upon relevant facts whose accuracy is not being questioned."[192]

All of this suggests that ex parte examination of utility is not currently accomplishing much. An examiner who interposes a utility rejection will find the rejection almost impossible to defend against a determined applicant with even modest resources. For most cases, utility examination accomplishes little more than providing the examiner an opportunity to note in the prosecution history the existence of a potential litigation issue over utility.[193] That information could be elicited without subjecting applications to the potentially costly and ultimately one-sided exercise of examining utility. In any event, USPTO statistics show that the frequency of rejections grounded in any part of § 101 (which would include eligibility in addition to utility) has been modest, varying from around 6 to 8 percent of all rejections over the past decade.[194]

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186. *Id.* § 2107.02(III)(A).

187. *Id.* § 2107(II)(B)(1)(ii).

188. *Id.* § 2107.02(VI).

189. Even proponents of a stronger utility doctrine recognize this limitation. *See, e.g.*, Risch, *supra* note 63, at 1207–08 (proposing a rule of de minimis commercial utility only, noting that examiners "lack the expertise and time" to measure the degree of utility).

190. *See, e.g.*, Seymore, *supra* note 63, at 1506 (citing FED. TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY ch. 5, at 9 (2003)) (noting that the USPTO "cannot easily probe the applicant's assertions" concerning the operability of a claimed invention).

191. MPEP, *supra* note 7, § 2107(II).

192. *Id.*

193. Except, perhaps, for inventions that are allegedly not operative at all because (for example) they violate fundamental laws of physics. We deal with this by retaining examination of enablement per *infra* notes 222–24 and accompanying text.

194. *Agency Trends: Rejections in Office Actions for Patent Applications*, U.S. PAT. & TRADEMARK OFF., https://developer.uspto.gov/visualization/agency-trends-

Further, given the asymmetry problem, we doubt that simply throwing more money at ex parte examination of utility is likely to change outcomes. In contrast to relative patentability inquiries, which are amenable to improvement with increased examiner time and resources (including training and expertise along with better search methodologies and technologies), an infusion of resources cannot realistically strengthen absolute inquiries such as utility.

We recognize that the ex parte system, as currently configured, allows the USPTO to deploy the utility requirement to screen out applications claiming inventions that are facially inoperable.[195] But the existence of a small set of fringe cases does not justify the current requirement to subject all applications to ex parte examination on utility, especially considering that those applications are likely to be caught by other patentability doctrines anyway.[196] Even if they are not, those patents are unlikely to impose any significant social costs because the market will ignore them.[197]

2. Examining Subject Matter Eligibility

Much of our critique of the choice to require ex parte examination for utility also applies to the ex parte examination of subject matter eligibility since both are fairly categorized as predominantly absolute patentability inquiries.[198] However, because current examination practices for eligibility are more complex than those for utility, we must elaborate further on our critiques here.

Under the USPTO's present subject matter eligibility approach, laid out in 2019,[199] the USPTO has sought to "facilitate examination"

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rejections-office-actions-patent-applications (last visited Sept. 12, 2024) (select time range beginning May 2014 and ending May 2024; then click apply).

195. *See, e.g.*, *In re* Swartz, 232 F.3d 862, 864 (Fed. Cir. 2000) (per curiam) (affirming rejection on utility grounds of an application directed to a cold fusion process).

196. Notably the enablement doctrine.

197. Kieff, *supra* note 181, at 107 ("A useless patent will not be infringed."); Lowell v. Lewis, 15 F. Cas. 1018, 1019 (C.C.D. Mass. 1817) (Story, J., riding circuit) (observing that if an invention "be not extensively useful, it will silently sink into contempt and disregard").

198. We are hardly the first to debate the USPTO's role in adjudicating eligibility, but others have not used the relative/absolute typology as the foundation for their arguments. *Compare* John M. Golden, *Patentable Subject Matter and Institutional Choice*, 89 TEX. L. REV. 1041, 1041 (2011) (arguing, in an article written before *Mayo* and *Alice*, that patent eligible subject matter decisions should be "primarily entrusted to the [Patent Office], rather than, as it is now, to the courts"), *with* Kristen Osenga, *Institutional Design for Innovation: A Radical Proposal for Addressing § 101 Patent-Eligible Subject Matter*, 68 AM. U. L. REV. 1191, 1232 (2019) (arguing that the USPTO should not undertake patent eligibility inquiries).

199. MPEP, *supra* note 7, § 2106. The USPTO devoted significant attention and resources to grappling with the *Alice/Mayo* test, especially during the

for compliance with *Alice/Mayo* step one in cases that appear to implicate the abstract idea exception.[200] Specifically, the USPTO has "distill[ed] the relevant case law into enumerated groupings of abstract ideas"[201] and instructed its examiners that, where an identified claim limitation falls within any of the groupings, "it is reasonable to conclude that the claim recites an abstract idea" for purposes of *Alice/Mayo* step one. But—and most significantly—where the subject limitation does not fall within one of the groupings, the examiner may reasonably conclude that the claim does not recite an abstract idea and thus likely survives the eligibility challenge.[202]

Setting aside the question of whether the USPTO's groupings-oriented shortcut comports with the case law, we see little about it that calls forth the special expertise of USPTO examiners. It is a classic absolute inquiry that those skilled in contested proceeding adjudications could undertake.[203] Instead of comparing the claim to some other referent, the examiner characterizes the invention, divorced from the claim, to determine whether it falls within a particular bucket. There is not a discrete, ex ante referent—the hallmark of a relative reference.

The USPTO practice regarding *Alice/Mayo* step two presents an even weaker case for being evaluated via ex parte examination because of the asymmetry problem. Where the application of step two involves determining whether the claim amounts to something significantly more than "what is well-understood, routine, conventional activity in the field,"[204] the MPEP instructs examiners

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directorship of Andrei Iancu, culminating in the rollout of guidance documents in 2019. For a largely laudatory study, see Stephanie Bloss, *Taming the Monster: The 2019 Patent Eligibility Guidance Brings Stability Back to Patent Eligibility Doctrine*, 102 J. PAT. & TRADEMARK OFF. SOC'Y 545 (2022) (suggesting that the USPTO's approach be used to guide broader reform efforts); *see also* Jason Sanders & Paul Fina, *§ 101 Patent Eligibility: Advocation of the Supreme Court Proffering a Bright-Line Rule*, 31 TEX. INTELL. PROP. L.J. 37, 58–59 (2022) (lauding guidelines and suggesting the Supreme Court adopt them as the law).

200. MPEP, *supra* note 7, § 2106.04(a).

201. *Id.* (listing three such groupings: "mathematical concepts," "certain methods of organizing human activity," and "mental processes").

202. *Id.* Even where the examiner determines that the claim does recite an abstract idea, the MPEP instructs that the examiner must also conclude that the claim recites additional elements that "integrate the [abstract idea] into a practical application" before proceeding to *Alice/Mayo* step two. *Id.* § 2106.04(d).

203. This critique on institutional competence grounds may echo some of Professor Osenga's conclusions, although she invokes the law/fact distinction to explain her reasoning. *See* Osenga, *supra* note 198, at 1237–39 (arguing that to the extent that eligibility questions are primarily questions of law, courts are more competent to address those questions than the USPTO is); *id.* at 1241–42 (arguing that the USPTO's technical expertise may not be adequate where eligibility inquiries call for intimate knowledge of computer technology).

204. MPEP, *supra* note 7, § 2106.05.

that such a determination is factual.[205] Examiners are supposed to support those factual determinations by citing to the applicant's specification, the case law, or a publication but are also permitted to take "official notice of the well-understood, routine, conventional nature of the additional element(s)."[206] An applicant can respond in the usual ways: amend the claim, offer arguments, or submit an expert declaration.[207] The last strategy is particularly useful to challenge an examiner's assertion about what is well-known, conventional, or routine.[208]

Here, the asymmetry problem is likely to arise. The examiner can do little more than "reevaluate whether the additional elements are in actuality well-known, routine, conventional activities to those who work in the relevant field."[209] And if the examiner relied on official notice, the examiner is supposed to supply a declaration "setting forth specific factual statements and explanation to support the examiner's position."[210] But we are skeptical that examiners typically have the time, resources, and (in some instances) expertise to respond in such a fashion. As a result, the ex parte analysis of *Alice/Mayo* step two seems unlikely to produce a meaningful prosecution record.[211] The ex parte setting does not, as a practical matter, allow for competing expert declarations and reasonable opportunities to cross-examine on eligibility, as is the case with its fellow absolute patentability requirement, utility.[212] To the extent that this methodology runs afoul of our normative principle against mixing absolute and relative inquiries, the quasi-relative step two simply seems not worth the candle, especially in light of our proposed doctrinal reforms.[213]

3. Examining Written Description and Enablement

What about ex parte examination for compliance with the disclosure doctrines of written description and enablement? These represent closer calls, especially because these doctrines generally reflect a mix of absolute and relative elements.[214] Nevertheless, the distinctions between written description and enablement called out

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205. *Id.* § 2106.05(d) (citing Berkheimer v. HP, Inc., 881 F.3d 1360, 1368 (Fed. Cir. 2018)).

206. *Id.* § 2106.05(d)(I). The MPEP specifies that a prior art search is not necessary to resolve this inquiry. *Id.* § 2106.05(d).

207. *Id.* § 2106.07(b)

208. *Id.*

209. *Id.* § 2106.07(b)(2).

210. *Id.*

211. It seems likely that the record will either be minimal or one-sided in favor of the applicant in light of the applicant's likely access to expert resources.

212. *Cf.* MPEP, *supra* note 7, § 2107.

213. *See supra* notes 141–63 and accompanying text.

214. *See supra* notes 164–74 and accompanying text.

by the relative/absolute typology provide a few insights on how to handle these matters in ex parte examination.

The written description requirement, as currently formulated, polices claims to priority in cases involving amended or later-added claims.[215] It has also been used to strike down claims deemed unsupported by the written description for other reasons—usually because they include functional limitations that are not well-correlated to any structures set out in the written description, which would provide inventors with protection deemed too broad in scope.[216] We have suggested that the analysis in the priority-policing written description cases could be likened to a relative inquiry under our typology.[217] To the extent that those cases call for analyzing a claim in a later application to see if the limitations are all supported by the written description in an earlier application, that analysis may also be reasonably well-suited for an examiner's skill set. Indeed, that analysis could be offered as a classic example of a relative inquiry, with the claim and the earlier application serving as the discrete ex ante comparators. The focus on the written documents is akin to the relative analyses in novelty and nonobviousness and, in fact, is even more cabined than the obviousness analysis in the sense that obvious variants are not deemed within the inventor's possession for priority purposes.[218] To us, all of this suggests that using ex parte examination to analyze priority-policing written description issues is plausible.

In our view, however, it does not automatically follow that ex parte examination is equally effective for the adjudication of written description issues in the functional-claiming/scope-policing cases. The analysis in those cases is either blended or something more closely approaching an absolute inquiry. Those cases, while often opaque, frequently seem to turn on judgment calls that appear to draw more from policy considerations than from technical facts. We are not sanguine about that practice of forcing examiners to undertake these sorts of judgments. The chief insight of our relative/absolute typology here is to reinforce the proposition that the written description doctrine ought to be seen as a conglomeration of at least two doctrines, and the assumption that both are amenable to ex parte examination ought to be reconsidered.

To be sure, some of these critiques might also suggest that ex parte examination of enablement is problematic. We are not willing to go that far. Enablement is a blended doctrine in our typology

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215. *See supra* Subpart II.C.2.

216. *See supra* Subpart II.C.2.

217. *See supra* Subpart II.C.2.

218. Lockwood v. Am. Airlines, Inc., 107 F.3d 1565, 1571–72 (Fed. Cir. 1997). *But see* Timothy R. Holbrook, *The Written Description Gap*, 45 LOY. U. CHI. L.J. 345, 358–62 (2013) (arguing against this rule from a possession-based approach due to lack of proper precedential antecedent and theoretical basis).

(tipping towards the relative), which permits the argument that it, like other relative inquiries, is suited for ex parte examination. If enablement invariably involved little more than a simple comparison between a claim and the written description, one could suggest that it is as appropriate for ex parte examination as is the priority-policy branch of the written description requirement.

But, in operation, the comparison entailed in an enablement analysis is not so simple. As we have noted, the undue experimentation inquiry dominates many assessments of enablement, and that inquiry falls somewhere between purely relative and purely absolute. Some elements of the undue experimentation inquiry are best analyzed through testing overseen by experts. As we noted in connection with the ex parte examination of utility, examiners do not have ready access to these resources.[219] Moreover, patent applicants enjoy a presumption of patentability,[220] so the burden is on the examiner to marshal facts that would support a prima facie case that experimentation would be undue, comparable to the problem with utility examination.[221]

Accordingly, our typology provides no clear answer on the propriety of ex parte examination of enablement. As such, we fall back on familiar policy arguments. If the USPTO performed no review of the adequacy of patent disclosures, then applicants could easily game the system to disclose as little information as possible, which could have negative systemic consequences for the quality of patent disclosures.[222] Additionally, retaining the ex parte examination of enablement would allow the USPTO to screen out inventions at that stage that are inoperable or premature, even if there is no ex parte examination of utility.[223] Moreover, the downstream consequences of delaying all examination of the patent disclosure to an *inter partes*

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219. FED. TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY 9 (2003); Seymore, *supra* note 72, at 1020 & n.181.

220. *See In re* Piasecki, 745 F.2d 1468, 1472 (Fed. Cir. 1984); *In re* Oetiker, 977 F.2d 1443, 1445 (Fed. Cir. 1992); *see also* Seymore, *supra* note 72, at 1023 (criticizing this presumption and suggesting shifting the burden or persuasion to the applicant).

221. USPTO guidelines make this point clear in the context of utility. Examiner Guidelines for Biotech Applications, 60 Fed. Reg. 97 (1995); *see supra* Subpart IV.A.1.

222. Holbrook, *supra* note 110, at 804; R. Polk Wagner, *Reconsidering Estoppel: Patent Administration and the Failure of* Festo, 151 U. PA. L. REV. 159, 214–15 (2002).

223. *See* Seymore, *supra* note 63, at 1493. Indeed, Sean Seymore has advocated for a more robust use of enablement in this context "with no need for or help from its § 101 statutory cousin" of utility. *Id.* at 1494. Admittedly, Seymore's concerns are driven by issues in credibility assessments under the utility doctrine for seemingly impossible inventions. *Id.* at 1507–23. Although we are motivated differently, we see alignment between our views.

setting counsel that, if close, examiners should continue to assess enablement.[224]

B. Limiting Ex Parte Examination to the Relative Patentability Requirements

The foregoing critiques provide the springboard for a proposal to relieve the USPTO of the burden of undertaking ex parte examination for compliance with the utility and eligibility requirements. Here, we explain the proposal, lay out some additional changes that would be important if it was implemented, and address the issue of maintaining patent quality.

1. A Reform Proposal

Our analysis leads us to conclude that the USPTO's system of ex parte examination could be fundamentally redesigned to remove absolute patentability inquiries from the scope of ex parte examination. Under our proposal, the USPTO would undertake ex parte examination only as to the relative patentability inquiries. The absolute inquiries would be assessed exclusively in *inter partes* administrative or judicial proceedings.[225]

Accordingly, under our proposal, ex parte examination for compliance with utility, eligibility, and scope-based written description would cease. Ex parte examination for compliance with novelty and nonobviousness would continue. Examiners would be permitted to assess issues of new matter and priority through that version of the written description doctrine (although we would advocate formally delineating that as a separate doctrine altogether). The USPTO would also keep its authority to examine enablement ex parte, on the rationale that it is primarily—though not purely—a relative inquiry.

The connection between a relative/absolute typology and institutional arrangements is also evident in European trademark law. There, the institutional arrangements are the opposite of what we propose for patent law, reflecting differences between our

224. We are also not opposed to calls to enhance patent disclosures to aid in such assessments, such as Seymore's and other's calls for more working examples, especially in unpredictable arts. *See id.* at 1529–31; Seymore, *supra* note 112, at 641.

225. Our analysis counsels for such a proposal but does not demand it. There are other alternatives that would also be informed by the relative/absolute distinction. For example, all filed applications could be subject to a heightened presumption that they comply with the absolute patentability conditions, where the presumption could be overcome only in extreme cases of self-evident non-compliance, such as applications claiming inoperable inventions. Compliance with the relative patentability inquiries would remain the subject of the existing rules, which also require the USPTO to establish unpatentability, but only by a preponderance of the evidence. *In re* Caveney, 761 F.2d 671, 674 (Fed. Cir. 1985).

definition of relative patentability inquiries and the European notion of relative grounds of registrability for trademarks.[226] In particular, we do not confine relative patentability inquiries to disputes about competing claimants to rights.[227] Irrespective of these differences, it intrigues us that the relative/absolute typology, as used in trademark law, has generated important debates about how to allocate authority among institutions.[228]

Some might view our proposal as radical, or even fantastical, given that it purports to upset decades of settled practice. We think it is radical conceptually, but it is likely to have a more moderate

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226. When the European Union Intellectual Property Office (EUIPO) examines applications for registration (an ex parte proceeding), the EUIPO assesses compliance with absolute grounds, but not relative grounds. *See* Guidelines for Examination of European Union Trade Marks, pt. C, § 1, EUIPO, https://guidelines.euipo.europa.eu/binary/2214311/2000170000 (last visited Sept. 12, 2024). Relative grounds may be raised in oppositions before the EUIPO (a pre-grant *inter partes* proceeding), in cancellations before the EUIPO (a post-grant *inter partes* proceeding), or in infringement litigation. Regulation, *supra* note 19, art. 8(1) (specifying that relative grounds may be invoked "[u]pon opposition"); *id.* art. 60(1) (specifying that relative grounds may be invoked "on application to the Office or on the basis of a counterclaim in infringement proceedings"). Absolute grounds may also be raised in all of these settings. *See id.* art. 59(1). A party raising relative grounds in any of these contested proceedings must be the proprietor of the earlier mark or be authorized by the proprietor to exercise rights under the earlier mark. *Id.* art. 63(1)(b) (incorporating Article 46(1)). Absolute grounds may also be raised in these contested proceedings, *id.* art. 59(1), without such constraints on standing. *Id.* art. 63(1)(a) (specifying that absolute grounds may be raised in a contested proceeding by "any natural or legal person and any group or body set up for the purpose of representing the interests of manufacturers, producers, suppliers of services, traders or consumers, which, under the terms of the law governing it, has the capacity in its own name to sue and be sued").

227. If we did confine relatively patentability inquiries to contests about priority of rights, we might conclude that those inquiries ought to be funneled into *inter partes* proceedings. That, indeed, has been the tradition in American patent law in soon-to-be-defunct interference proceedings under the 1952 Act, 35 U.S.C.§ 135(a) (2010) (pre-AIA), and derivation proceedings under the current act. 35 U.S.C. § 135(a).

228. For example, in 2005, the International Trademark Association (INTA) conducted a survey on the advantages and disadvantages of "relative examination systems" (those that include relative grounds as part of the examination process) and "absolute examination systems" (those using only absolute grounds in the examination process). INT'L TRADEMARK ASS'N, RELATIVE EXAMINATION SYSTEMS VS. ABSOLUTE EXAMINATION SYSTEMS: WHETHER INTA SHOULD ENDORSE ONE OR THE OTHER (2005) (declining to provide any endorsement). Some countries were considering eliminating relative grounds from examination because of the fear of inefficiencies in blocking new registrations based on older registrations of marks no longer in use. Désirée Fields & Hiroshi Sheraton, *European Commission Proposes Reform of European Trade Mark System*, 35 E.I.P.R. 563–66 (2013).

practical effect on day-to-day USPTO operations. Rejections based on utility and eligibility are infrequent compared to those based on novelty and nonobviousness, according to one USPTO study of Office Actions from 2008 to mid-2017.[229]

It might be argued that our critique of the absolute patentability inquiries in ex parte examination must force us to accept the more extreme proposition that the absolute patentability inquiries play no meaningful role and should be jettisoned altogether. But we see no reason to go that far to make our intended point, because the structural impediments of ex parte examination do not exist, at least not to the same degree, in *inter partes* administrative proceedings or in litigation. This is why our proposal is limited to expunging absolute patentability inquiries from ex parte examination, rather than expunging them altogether.[230]

To the other extreme, one might argue that if we are dispensing with ex parte examination of some patentability inquiries, we ought to consider eliminating all of them, notwithstanding the relative/absolute distinction, fully converting to a registration system. Again, we do not see the need to go that far. We think that the relative/absolute distinction offers a reasonable dividing line, and we have laid out a plausible case for moving absolute inquiries *out* of ex parte examination, leaving us to justify why it makes sense to leave relative inquiries in. Application of the relative inquiries—especially the prior art doctrines—lies at the core of what the USPTO has long done. The search for prior art and the application of prior art rules lie

229. Qiang Lu et al., *USPTO Patent Prosecution Research Data: Unlocking Office Action Traits* 1–2 (USPTO Economic Working Paper, Paper No. 2017-10, 2017) (reporting that about 11% of office actions in the dataset involved § 101 matters—defined to include inventorship and same-invention double patenting in addition to eligibility and utility—while 79% of office actions included a § 103 rejection and 42% included § 102 rejections). Some of the studied office actions would have preceded the *Alice* and *Mayo* decisions; thus, the § 101 fraction might be higher if the time frame were limited to the post-*Alice/Mayo* era. *See also* Collen Chien & Jiun Ying Wu, *Decoding Patentable Subject Matter*, 2018 PATENTLY-O L.J. 1 (Oct. 16, 2018), https://cdn.patentlyo.com/media/2018/10/Chien.Decoding101.2018.pdf (reporting that § 101 eligibility rejections under *Alice/Mayo* cluster disproportionately in a narrow band of art areas, appearing in 52% of office actions in medical diagnostics cases and 75% of office actions in business methods cases).

230. The utility doctrine supplies a good illustration. Some have argued that it should be eliminated altogether as a patentability requirement. Seymore, *supra* note 63, at 1050. Our point here is simply that utility is inherently unsuited for evaluation in ex parte examination, at least. Whether, for example, utility has a role in demonstrating the existence of a completed invention as of the application filing date, and whether that question could be adjudicated effectively in contested proceedings, are issues we need not take on here.

within the USPTO's core competence.[231] And it is reasonable to speculate that new technologies will amplify search capabilities, perhaps profoundly, given advancements in AI. We also believe that relative examination benefits the patent system by improving public notice through amendments and arguments made during the prosecution process. The colloquy between the examiner and the applicant can illuminate the meaning of the claim.[232] Formal amendments are useful in both assessing literal claim scope, as well as the doctrine of equivalents through prosecution disclaimer[233] and prosecution history estoppel,[234] respectively.

Moreover, it is reasonable to suggest that this core competence could be more readily nurtured if the USPTO narrows its substantive focus (and its examiner guidance and training efforts) to relative patentability inquiries. While we suspect that devoting larger budgets to the ex parte examination of absolute inquiries would be futile, it would be consistent with our proposal to take a different approach for the relative inquiries.[235] However, we are agnostic as to whether devoting additional resources to ex parte examination of the relative inquiries would advance the goals of the patent system enough to be worth the cost.

2. Collateral Considerations for Implementation

Our proposal to remove absolute patentability assessments from the ex parte prosecution implicates some collateral implementation issues that would be important to take into account. The first

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231. This is different from saying that the USPTO is always good at undertaking searches or reviewing prior art that the applicant submits. Christopher A. Cotropia et al., *Do Applicant Patent Citations Matter?*, 42 RSCH. POL'Y 844, 847 (2013) (arguing that examiners rarely rely on submitted prior art). It is also subject to the caveat that even the core relative inquiries may have elements that resemble absolute inquiries—such as the secondary considerations in obviousness. *See supra* notes 47–59 and accompanying text.

232. Phillips v. AWH Corp., 415 F.3d 1303, 1317 (Fed. Cir. 2005) (en banc) (noting role importance of the prosecution history in claim construction).

233. Omega Eng'g, Inc, v. Raytek Corp., 334 F.3d 1314, 1323 (Fed. Cir. 2003).

234. Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 733–34 (2002).

235. Accordingly, for example, projects to encourage the crowdsourcing of prior art searching would not be at odds with our proposal. *See Peer to Patent*, GOVLAB, https://thegovlab.org/project/project-peer-to-patent (last visited Sept. 12, 2024) (describing one such effort); *see also* Kieff, *supra* note 182, at 73 (arguing that relevant prior art "is rarely in the hands of the government but, rather, is often obtainable by, or in the hands of, a private party" with an incentive to reveal it in court); Dennis Crouch, *USPTO Third Party Submissions*, PATENTLY-O (Feb. 2, 2022), https://patentlyo.com/patent/2022/02/uspto-third-submissions.html (reporting that third parties availed themselves of the opportunity to submit prior art under 35 U.S.C. § 122(e) in only 14 of every 10,000 issued patents).

concerns the statutory presumption that a duly issued patent is valid,[236] and the accompanying rule that invalidity must be proven by clear and convincing evidence in judicial proceedings and at the International Trade Commission.[237] The rationale for the presumption of validity, at least in part, is "that the USPTO, in its expertise, has approved the claim."[238] Although *inter partes* proceedings within the USPTO apply the preponderance of the evidence standard, the burden still lies with the party challenging the patent.[239] Under our proposal, the statute should be amended to specify that the *patentee* bears the burden of establishing compliance with the absolute patentability doctrines in judicial and administrative *inter partes* proceedings, likely at a preponderance of the evidence standard, given that no ex parte examination would have been undertaken on those grounds.[240]

The second implementation issue concerns administrative challenges to patent validity through the *inter partes* review (IPR) and post-grant review (PGR) proceedings, which came into the patent statute via the America Invents Act.[241] As currently configured, administrative challenges based on utility or eligibility grounds can be asserted only in PGRs, not in IPRs.[242] However, a PGR can only be

236. 35 U.S.C. § 282(a).

237. Microsoft Corp. v. i4i Ltd. P'ship, 564 U.S. 91, 95 (2011); Radio Corp. of Am. v. Radio Eng'g Lab'ys, 293 U.S. 1, 7 (1934) ("A patent regularly issued, and even more obviously a patent issued after a hearing of all the rival claimants, is presumed to be valid until the presumption has been overcome by convincing evidence of error."); *see* Mark D. Janis, *Reforming Patent Validity Litigation: The "Dubious Preponderance,"* 19 BERKELEY TECH. L.J. 923, 929–30 (2004).

238. KSR Int'l Co. v. Teleflex Inc., 550 U.S. 398, 426 (2007).

239. 35 U.S.C. §§ 316(e), 326(e) (specifying that in an *inter partes* review or post-grant review proceeding, respectively, the challenger has the burden of proving a proposition of unpatentability by a preponderance of the evidence).

240. In the *i4i* case, the Court ruled that the clear and convincing standard applied even when the USPTO, in ex parte examination, had not considered the prior art raised in litigation. *i4i*, 564 U.S. at 99–100. This is true even though "court opinions that establish this rule do not explain the policies behind it." Doug Lichtman & Mark A. Lemley, *Rethinking Patent Law's Presumption of Validity*, 60 STAN. L. REV. 45, 52 (2007). The Court's opinion in *i4i* suggests that the presumption is animated not only by notions of administrative correctness, but also by other interests, such as reliance interests. *See i4i*, 564 U.S. at 112–13. But if the USPTO does not undertake examination on absolute grounds, there is no basis for an argument either of administrative correctness or of reliance because no review at all will have taken place.

241. Cuozzo Speed Techs., LLC v. Lee, 579 U.S. 261, 287 (2016) (Thomas, J., concurring).

242. 35 U.S.C. § 321(b) (stating that post-grant reviews can be requested on any invalidity ground as specified); *cf. id.* § 311(b) (stating that *inter partes* reviews can be requested only on the basis of prior art consisting of patents or printed publications).

initiated within nine months of the patent's issue date,[243] a constraint that does not apply to IPRs. If our proposal were adopted, it would be important to reconsider the short time limitation imposed on the initiation of PGRs to ensure that patent challengers would have a reasonable opportunity to bring administrative challenges to patents on absolute patentability inquiries such as utility and eligibility. This is a daunting proposition, given that the short time limitation for PGR proceedings was a key point of controversy in the debates over the America Invents Act.[244] Nevertheless, our approach would create a stronger incentive to utilize PGRs, which would be helpful not only in answering validity questions about a given patent but also in addressing earlier "a novel or unsettled legal question that is important to other patents or patent applications"—a consideration the USPTO Director is statutorily obligated to consider when deciding whether to authorize a PGR.[245] Early answers (and likely appeals) to the Federal Circuit could settle these matters more quickly and in accordance with the state of the art as of the filing date.[246]

3. Maintaining Patent Quality

Our proposal makes it easier for applicants to prevail in ex parte prosecution and defers the cost of adjudicating utility, eligibility, and written description to the time of the Patent Trial and Appeal Board, International Trade Commission, or courts. As such, our proposal might implicate concerns about patent quality, the subject of extensive scholarly literature. One strain of the patent quality literature questions whether investing more resources in ex parte examination would be cost-justified. Lemley doubted so, asserting that existing levels of investment maintained a state of rational ignorance at the USPTO.[247] More recently, Frakes and Wasserman have argued the opposite, proposing that the USPTO expand examiner time allotments for reviewing patent applications.[248]

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243. *Id.* § 321(c).

244. Michael A. Carrier, *Post-Grant Opposition: A Proposal and a Comparison to the America Invents Act*, 45 U.C. DAVIS L. REV. 103, 122 (2011).

245. 35 U.S.C. § 324(b).

246. *See* Holbrook, *supra* note 110, at 806 ("If the [US]PTO views the disclosures as sufficient, under a potentially erroneous standard, the patents will issue and the standard will not reach the Federal Circuit contemporaneously. The time lag, therefore, undermines the effectiveness of written description and enablement as a penalty default.").

247. Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1531–32 (2001).

248. Michael D. Frakes & Melissa F. Wasserman, *Irrational Ignorance at the Patent Office*, 72 VAND. L. REV. 975, 980–81 (2019); *see also* Shubha Ghosh & Jay Kesan, *What Do Patents Purchase? In Search of Optimal Ignorance in the Patent Office*, 40 HOUS. L. REV. 1219, 1226 (2004).

This debate over the costs and benefits of expanding the investment in ex parte examination treats examination as an exercise in searching for and applying prior art references.[249] This assumption makes sense; the effort is to use the time spent on examination as a proxy for quality and, in our experience, applying the prior art doctrines is likely to be an examiner's most time-intensive task in prosecution.[250]

Our proposed typology resists treating patentability inquiries as a monolith. As such, it permits a fresh look at the rational ignorance debate. The relative/absolute dichotomy, and the insights that flow from it, impel us to look in a more fine-grained way at the rational ignorance question. As to the relative patentability inquiries, we are agnostic as to whether a cost/benefit analysis counsels in favor of spending more resources.[251] But we are skeptical that increasing resources available to address utility and subject matter eligibility in ex parte prosecution would produce benefits in excess of costs. Indeed, our argument is consistent with John Duffy's advocacy for a reasoned decision-making model of USPTO examination, which he offers as an alternative to approaches based on optimizing USPTO ignorance.[252] Duffy's model does not demand that the USPTO invest equally in gathering information on all patentability issues.[253] To the contrary, Duffy suggests that in operating under a model of reasoned decision-making, the USPTO "could quite reasonably decide that little or even no effort should be devoted to acquiring information on certain issues."[254] Our proposal would formalize that approach by removing any information gathering on the absolute inquiries.

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249. *See, e.g.*, Frakes & Wasserman, *supra* note 248, at 1021 (stating that "the present degree of ignorance—that is, the limited ability of examiners to unearth prior art and hence reject patent applications that fail to meet the patentability standards—is *irrational*"); *cf.* Sawicki, *supra* note 9, at 753–57 (distinguishing, for example, between subject matter eligibility and enablement and arguing that late false positives as to eligibility would impose significant costs, whereas late false positives for enablement determinations would not).

250. We might wonder about the time consumed in applying § 101 eligibility guidance to some types of subject matter.

251. *See supra* notes 231–34 and accompanying text.

252. John F. Duffy, *Reasoned Decisionmaking vs. Rational Ignorance at the Patent Office*, 104 IOWA L. REV. 2351, 2358 (2019) (describing the reasoned decisionmaking model as one that "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").

253. *See id.* at 2374.

254. *Id.* (pointing to the utility doctrine as one that might reasonably be given minimal treatment in ex parte examination, albeit on the rationale that the utility requirement does little work altogether in the patent system).

CONCLUSION

This Article offers a new approach to thinking about the patentability doctrines, the relative/absolute typology. This taxonomy provides numerous insights both for the substantive law of patentability and for the processes by which the USPTO assesses compliance with substantive patentability requirements. First, the typology provides a new organizing principle for sorting through the existing patentability requirements. In this regard, it has substantial pedagogical value, extending beyond the classroom. For example, the relative/absolute typology should be used as a framing device for model jury instructions in patent cases where patent validity is at issue.

Second, the typology suggests a normative principle against mixing relative and absolute inquiries within patentability doctrines. There are significant implications here for reforming the *Alice/Mayo* eligibility test and reconsidering the debate about the relationship between the enablement and written description requirement.

Third, the typology provides a new mode for thinking about institutional choice in the patent system. In particular, it prompts a fresh interrogation about the efficacy of ex parte patent examination. That interrogation leads us to conclude that the USPTO should be relieved of the burden of examining applications for compliance with the absolute patentability conditions and focus its resources exclusively on the relative patentability conditions—a proposal we have laid out and scrutinized here.

Finally, while we have limited the scope of our analysis to the patentability rules, the relative/absolute typology may have implications for other patent doctrines. The relative/absolute distinction affords a new language and lens for interrogating other patentability doctrines. For example, it would be worth considering the extent to which infringement doctrine is relative and absolute inquiries find their way in.[255] While we do not argue that the relative/absolute typology has explanatory force for every nuance in every patent law doctrine, it has a significant role to play, heretofore left unexplored.

255. The doctrine of prosecution history estoppel, and other legal limitations on infringement under the doctrine of equivalents, come to mind as fruitful avenues for future research. *See* Timothy R. Holbrook, *Equivalency and Patent Law's Possession Paradox*, 23 HARV. J.L. & TECH. 1, 21–29 (2009) (delineating and exploring various legal limitations on the doctrine of equivalents).