

2016

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Recommended Citation

Timothy R. Holbrook, *Patent Anticipation and Obviousness as Possession*, 65 Emory L. J. 987 (2016).
Available at: <https://scholarlycommons.law.emory.edu/elj/vol65/iss4/2>

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PATENT ANTICIPATION AND OBVIOUSNESS AS POSSESSION

Timothy R. Holbrook*

ABSTRACT

The concept of possession in property law operates to allocate property rights among competing claimants by awarding the property to the first to take possession. Possession in this context requires an act that communicates to third parties that someone has exercised dominion over the item. Patent law operates in similar ways. Inventors must disclose their invention in the patent document to memorialize what their creation is. This disclosure communicates to third parties the innovation over which the patent owner is asserting dominion. Patent law has similar first-in-time dynamics, awarding the patent among competing applicants to the first-to-invent under the 1952 Patent Act and the first-to-file under the America Invents Act. But patent law has another “racer”—the public via the prior art.

The doctrines of novelty and non-obviousness ask, in essence, whether the public was already in possession of the invention prior to the inventor. If so, then the patent application should be rejected. This possession-based view of novelty and non-obviousness offers important insights and prescriptions. As to novelty, the possession framework suggests that the current requirement that the prior art disclose the invention as arranged in the claim is unwarranted. It also suggests that the current doctrine of inherency is wrong. With respect to obviousness, the possession-based approach may be emerging through the Supreme Court’s reinvigoration of the “obvious to try” standard. The possession-based framework also highlights the inconsistent treatment of obviousness as possession in other contexts. Prescriptively, bringing obviousness into line with the patent law doctrine primarily responsible for

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demonstrating possession—enablement—offers an opportunity to map patent law more closely with the lived experience of technologists. The proposed approach offers a potential bridge that renders obviousness more accessible to its intended audience—scientists, engineers, and other innovators.

INTRODUCTION

From an early age, children have an intuitive sense that something in their hands is “theirs.” The ubiquitous “mine” tells others that whatever happens to be in their grasp belongs to them, in some sense. This strong intuition runs throughout life. On the second day of my property law class, I ask my students how many of them are in the same seat as the first day. Almost all of them raise their hands. I then inquire how many would have been annoyed if someone else had taken their seat. Again, nearly everyone raises their hand, suggesting they felt some intuitive right to this common resource—the seats—that attached when they occupied it, or took possession of it.

These intuitions are reflected in the law of property through various doctrines of possession. Indeed, the concept of “possession” is central to property law.¹ For example, we see the intuitive nature of possession in the adage “possession is nine-tenths of the law.”² At common law, it offered an explanation for the origin of property.³ The first to take possession of “undiscovered”⁴ land or to conquer new territory was the owner. The first to

¹ See generally Richard A. Epstein, *Possession as the Root of Title*, 13 GA. L. REV. 1221, 1221 (1979) (discussing property rights and exclusive possession); Carol M. Rose, *Possession as the Origin of Property*, 52 U. CHI. L. REV. 73, 75 (1985) (explaining that “first possession is the root of title”).

² See Carol M. Rose, *The Law Is Nine-Tenths of Possession: An Adage Turned on Its Head*, in LAW AND ECONOMICS OF POSSESSION 40, 40 (Yun-Chien Chang ed., 2015).

³ See Rose, *supra* note 1, at 74–75. Rose contrasts the common law approach against Locke’s labor theory and various social contract theories. See *id.*

⁴ Or, should we say, first to be discovered by European powers, at the expense of the indigenous populations. Possession in essence governed the relationships among the European powers. See *Johnson v. M’Intosh*, 21 U.S. (8 Wheat.) 543, 573 (1823) (“This principle was, that discovery gave title to the government by whose subjects, or by whose authority, it was made, against all other European governments, which title might be consummated by possession.”). The Supreme Court then controversially extrapolated from this position to insist that such possession granted title to the U.S. government superior to that of the Native Americans. *Id.* at 574 (“In the establishment of these relations, the rights of the original inhabitants were, in no instance, entirely disregarded; but were necessarily, to a considerable extent, impaired. They were admitted to be the rightful occupants of the soil, with a legal as well as just claim to retain possession of it, and to use it according to their own discretion; but their rights to complete sovereignty, as independent nations, were necessarily diminished, and their power to dispose of the soil at their own will, to whomsoever they pleased, was denied by the original fundamental principle, that discovery gave exclusive title to those who made it.”).

take possession of, or occupy, a wild animal is deemed the owner,⁵ and the first to take possession of lost property is the “finder.”⁶ One who occupies and uses another’s land can become the true owner through adverse possession.⁷ The concept of possession, therefore, pervades property law.

At its most basic level, possession plays two important roles in property law. First, property rights are typically allocated to the first person to obtain possession. This “first in time” concept allows for the allocation of property rights over an item among competing claimants. Whoever wins the “race” gets the property. Second, and also essential, is that the acts that demonstrate possession must communicate to third parties that someone is now asserting dominion over the item. Only when this public notice aspect is satisfied does the law view a party as having taken possession of the item.

At first blush, it might seem that property-based conceptions of possession have absolutely nothing to do with patent law. After all, patents relate to the intangible, not a particular physical embodiment. Possession would seem to have no salience in the patent context.

Such a conclusion, however, is wrong. Concepts of “possession” do exist in, and often influence, patent law. At the most basic, intuitive level, inventors feel passionately about their creations, viewing them as the fruit of considerable labor. Innovators can have an intuitive sense of ownership—that they are entitled to rights with respect to their invention because they created it. Early patent treatises, taking a more natural rights perspective, specifically linked the invention and possession.⁸

⁵ See *Pierson v. Post*, 3 Cai. R. 175, 176 (N.Y. Sup. Ct. 1805).

⁶ See, e.g., *Treasure Salvors, Inc. v. Unidentified Wrecked & Abandoned Sailing Vessel*, 640 F.2d 560, 571 (5th Cir. Mar. 1981) (“As a general rule, under the law of finds, a finder acquires title to lost or abandoned property by ‘occupancy’, i.e. by taking possession of the property and exercising dominion and control over it.”).

⁷ See, e.g., *Gary v. Dane*, 411 F.2d 711, 713 (D.C. Cir. 1969) (“Under the District Code, a person obtains valid title to land by adverse possession which is actual, exclusive, continuous, open and notorious for 15 years. While casual acts are not enough to establish ownership by adverse possession, there is a presumption, effective to establish title in the absence of evidence to the contrary, that the possession is adverse whenever there is ‘open and continuous use of another’s land.’” (citations omitted) (quoting *Kogod v. Cogito*, 200 F.2d 743 (1952))).

⁸ See, e.g., 1 WILLIAM C. ROBINSON, *THE LAW OF PATENTS FOR USEFUL INVENTIONS* 38 n.1 (Boston, Little, Brown & Co. 1890) (“Whether we regard the knowledge, remaining for the present in the exclusive control of him whose intellectual production it is, as property, or as a possession of ideas, to which some other term might be more appropriate, it is still a possession, of which the owner cannot by any rule of natural justice be deprived without his consent. In this view it may, as it seems to me, justly be termed property.”).

Patent law does work differently from tangible property, however. Inventors do not get protection for the particular physical embodiment of their inventions, such as the actual mouse trap they created. Instead, patents protect something intangible, the “invention,” which may go beyond the inventor’s original, basic creation. As a result, patent law requires inventors to memorialize their invention in the patent document itself.⁹ The patent document, therefore, provides the evidence of possession. While “possession” in the context of patent law presents some complications compared to the tangible assets in real and personal property, the concept is necessarily present. The patent system channels the delineation of the “thing” into the patent document.

Consequently, possession is an important aspect of patent law.¹⁰ To get a patent, an inventor must necessarily demonstrate that she has created *something* that can be the subject of the patent—her invention.¹¹ The applicant must show that she is in possession of her innovation. What the inventor physically created, however, does not define the scope of patent protection. Instead, the articulation of the inventor’s creation takes place through the patent document’s disclosure, referred to as the specification.¹² The specification must provide a written description of the invention and disclose information sufficient to allow the person of ordinary skill in the art (PHOSITA) to make and use the invention without undue experimentation based solely on the patent document.¹³

The Court of Appeals for the Federal Circuit, the court with national jurisdiction over all appeals arising under the U.S. patent laws, has expressly resorted to the idea of “possession” to assess whether a patent owner’s disclosure is sufficient. Specifically, the court has held that the written description of the invention must “reasonably convey[] to those skilled in the art that the inventor had possession of the claimed subject matter as of the

⁹ See 35 U.S.C. § 112(a) (2012).

¹⁰ See generally Timothy R. Holbrook, *Possession in Patent Law*, 59 SMU L. REV. 123 (2006) (arguing enablement is the best method to determine possession).

¹¹ See Oskar Liivak, *Finding Invention*, 40 FLA. ST. U. L. REV. 57, 58 (2012) (“[W]e have lost sight of the invention—the substantive technical solution created by the inventor.”).

¹² See Holbrook, *supra* note 10, at 146–47.

¹³ The applicant does not have to prove she actually constructed the invention; an adequate description of the invention is enough. For calls to require actual construction, also known as actual reduction to practice, see generally, Christopher A. Cotropia, *The Folly of Early Filing in Patent Law*, 61 HASTINGS L.J. 65 (2009); Sean B. Seymore, *The Teaching Function of Patents*, 85 NOTRE DAME L. REV. 621 (2010) (calling for more “working examples”—examples actually made).

filing date.”¹⁴ The extent of the disclosure impacts the scope of the rights afforded under the patent, and the patent may be invalidated if the disclosure fails to show that the applicant was in possession of the claimed invention.¹⁵

By requiring the disclosure of the invention in the patent document, one key aspect of possession from a property perspective is satisfied—public notice. As a public document, third parties are able to review patents to assess the scope of the attendant exclusive rights. The patent document thus acts in a manner akin to the acts of possession in real and personal property that communicate to third parties that an item has been acquired by another.¹⁶

The patent also addresses the second aspect of possession: the first-in-time dynamic. In the property-based ideas of possession, property rights generally are awarded to the first to take possession. Patent law operates similarly. To get a patent, an inventor must demonstrate that she is first in some sort of race.

Our metric for assessing who “wins the race” has changed recently, however. Until March 16, 2013, the United States operated on a “first-to-invent” system, where generally the first person to invent the innovation was entitled to the patent.¹⁷ The statute in force until that date generally is referred to as the 1952 Patent Act, the date when it was adopted, although it has been subsequently amended a number of times. Under the 1952

¹⁴ See *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc).

¹⁵ See *The Incandescent Lamp Patent*, 159 U.S. 465, 472 (1895) (“Instead of confining themselves to carbonized paper, as they might properly have done, and in fact did in their third claim, they made a broad claim for every fibrous or textile material, when in fact an examination of over six thousand vegetable growths showed that none of them possessed the peculiar qualities that fitted them for that purpose. Was everybody then precluded by this broad claim from making further investigation? We think not.”); see also Holbrook, *supra* note 10, at 158–59.

¹⁶ Timothy R. Holbrook, *Equivalency and Patent Law’s Possession Paradox*, 23 HARV. J.L. & TECH. 1, 4 (2009).

¹⁷ See 35 U.S.C. § 102(a) (2006) (1952 Act). With the changes made by the America Invents Act, confusion can arise regarding which provision is at issue. For ease of reference, I will simply place the relevant act after the citation to denote to which of the acts I am referring, the 1952 Act (as amended) and the AIA. For example, for § 102(b) under the 2011 amendments of the 1952 Act, I will write 35 U.S.C. § 102(b) (2006) (1952 Act); for the AIA, I will write 35 U.S.C. § 102(b) (2012) (AIA).

There are some exceptions to the “first to invent” rule even under the 1952 Patent Act. The statutory bars of 35 U.S.C. § 102(b) precluded a patent on an invention, more than one year before the filing of the application, the invention had been patented or disclosed in a printed publication anywhere in the world, or if it was on-sale or in public use within the United States. 35 U.S.C. § 102(b) (2006) (1952 Act). Also, the first to invent could lose the right to the patent if she abandoned, suppressed, or concealed the invention. See 35 U.S.C. § 102(g) (1952 Act).

Patent Act, the patent was awarded among competing applicants to the first to have invented the innovation.¹⁸

The United States was the only country to have a “first-to-invent” system.¹⁹ In part in an effort to harmonize our law with the rest of the world,²⁰ Congress passed the America Invents Act (AIA) in 2011. The U.S. system, effective March 16, 2013, switched primarily to a “first-to-file” system.²¹ Since March 2013, however, the United States has operated under a “first-inventor-to-file” system, so that, with some exceptions, the first applicant to file a patent application covering a particular innovation gets the patent among competing applicants. In this way, patent law operates very similarly to property-based ideas of possession in that property rights are awarded to the first to demonstrate sufficient possession.

In this regard, possession has even more salience in patent law than real or personal property. Possession is used in property law to allocate property rights, but, in the modern era, rarely do we encounter situations where possession determines the outcome of a property dispute. It is the rare occasion where the legal system is allocating previously unowned property among competing claimants. In contrast, the patent system is continuously creating

¹⁸ See 35 U.S.C. § 102(g) (1952 Act). In the first-to-invent system of the 1952 Patent Act, possession also had an evidentiary aspect because, to win priority, an applicant would have to prove that she had actually invented prior to others. 35 U.S.C. § 102(g)(1)–(2) (1952 Act). Generally the first to conceive of the invention and reduce the invention to practice, or to be diligent in reducing the invention to practice, is viewed as the first to invent and thus entitled to the patent. *Id.* An inventor has conceived of the invention when the inventor has the complete idea of the invention “expressed in such clear terms as to enable those skilled in the art to which the invention pertains to make, compound, build, or practice the device, compound, apparatus, or process which constitutes the subject matter of the invention.” *Field v. Knowles*, 183 F.2d 593, 600–01 (C.C.P.A. 1950). The requirement for an enabling disclosure is the analog to possession in the real property context. See *Holbrook*, *supra* note 10, at 154 (“In order to prove conception, the evidence must demonstrate a communication of the idea in a way such ‘that one skilled in the art could understand the invention.’ In other words, there must be evidence of an enabling description of the mental idea in order to demonstrate that the applicant possessed the invention.” (quoting *Burroughs Wellcome Co. v. Barr Labs., Inc.* 40 F.3d 1223, 1228 (Fed. Cir. 1994))). In this context, proof of possession serves an evidentiary purpose—determining which inventor should be awarded the invention. Under the America Invents Act, however, we have moved primarily to a first-to-file system, such that inquiry as to who was the first to invent will be of far less importance.

¹⁹ See Timothy R. Holbrook, *The Treaty Power and the Patent Clause: Are There Limits on the United States’ Ability to Harmonize?*, 22 *CARDOZO ARTS & ENT. L.J.* 1, 6 (2004).

²⁰ Leahy–Smith America Invents Act, Pub. L. No. 112-29, § 3(p), 125 Stat. 284, 293 (2011) (enacted) (“It is the sense of the Congress that converting the United States patent system from ‘first to invent’ to a system of ‘first inventor to file’ will improve the United States patent system and promote harmonization of the United States patent system with the patent systems commonly used in nearly all other countries . . .”).

²¹ There are exceptions, however, where the first to file will not get the patent. For example, if an applicant took the invention from another subsequent applicant, then the latter will be awarded the patent. See 35 U.S.C. § 102(b)(1) (2012) (AIA).

new property rights. Every time the U.S. Patent and Trademark Office (USPTO) grants a patent, a new right has been created, thus implicating aspects of possession multiple times per day.

Patent law does differ from property in an important way. In the property context, the allocation of rights involves the various, particular claimants to an item. In the patent context, simply winning the “race” against other inventors, while necessary, is not always sufficient. There is a third participant in the figurative race: the public. To be eligible for patent protection, the invention must be both novel²² and non-obvious,²³ which means an applicant must show that the invention is not already known generally.

Novelty is a term of art in patent law. An invention must be new, but under a very particular legal standard. An invention lacks novelty when a single prior art reference—such as an earlier scientific article—discloses the invention identically. When such identical disclosure occurs, the claimed invention is said to be anticipated by the prior art.²⁴ Thus, anticipation is the converse of novelty: if an invention lacks novelty, it is anticipated. The terms are often used interchangeably to discuss whether a single prior art reference has disclosed the entirety of the claimed invention.

Merely having a novel invention is insufficient to get a patent, however. An invention must also be non-obvious.²⁵ The non-obvious requirement ensures that patents are not awarded for trivial advances in the state of the art.²⁶ The standard is far more flexible than the novelty standard, allowing a fact finder to consider multiple references in the aggregate, such as multiple prior patents or scientific publications.²⁷ So, even if the invention is technically novel, it may not be patentable if it is not a significant improvement in the state of the art.

²² See 35 U.S.C. §§ 101–102 (AIA). The AIA changes the date of reference for assessing whether an invention is “new.” Under the 1952 Act, that date was generally the date of invention. The exceptions were various statutory bars under the 1952 Patent Act that precluded a patent if the invention was disclosed in some form more than one year prior to the date the inventor filed the application. Under the AIA, the novelty of the invention is assessed as of the date on which the applicant filed her patent application.

²³ See 35 U.S.C. § 103 (AIA).

²⁴ *Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1377 (2003).

²⁵ See 35 U.S.C. § 103 (AIA); 35 U.S.C. § 103 (2006) (1952 Act).

²⁶ See Glynn S. Lunney, Jr. & Christian T. Johnson, *Not So Obvious After All: Patent Law’s Nonobviousness Requirement, KSR, and the Fear of Hindsight Bias*, 47 GA. L. REV. 41, 42 (2012) (“The whole point of the doctrine is to separate trivial advances from more substantial advances and to ensure that only the latter receive patents.”).

²⁷ See *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 17–18 (1966) (detailing factors relevant to obviousness inquiry: scope and content of prior art, differences between prior art and claimed invention, level

Due to these two requirements, patent applicants must show that they are the first to possess the invention not only by being the first to invent (under the 1952 Act) or the first to file (under the AIA), but also by being first relative to general knowledge, i.e. the state of the art. The impact is to change our date of interest for assessing novelty and non-obviousness, with the 1952 Patent Act primarily concerned with the state of the art as of the date of invention and the AIA is focused on the filing date.²⁸ Although the AIA went into effect on March 16, 2013, patents filed before that date, or otherwise claiming priority to an application filed before that date, will be governed by the Patent Act of 1952. As such, until the last 1952 Patent Act patent expires (which will be 2033 at the earliest), the United States effectively has two patent systems.

Another way to think about novelty and non-obviousness, therefore, is to say that, to get a patent, the invention cannot already be within the possession of the public. This Article suggests viewing these two doctrines through such a lens is appropriate and offers important insights into these doctrines. It argues that if the public is already in possession of the invention, the invention should be anticipated or obvious, and no one can get a patent on that invention.

This observation is important both descriptively and positively. Patent law presently lacks a coherent theory to explain both novelty and non-obviousness. The novelty requirement has existed since the first patent statute, but non-obviousness evolved through the common law given the shortcomings of the novelty requirement, emerging initially as a requirement for inventiveness.²⁹ This common law was codified in § 103 in 1952.³⁰ Little theoretical work has been done, however, to provide a coherent theory explaining both of these provisions. Viewing both doctrines as a variation of possession, drawing on property theory, provides that missing theoretical account.

This Article uses a novel possession-based framework to explore these two doctrines and to offer a unifying theory for them. This perspective affords a

of ordinary skill in the art, and other secondary considerations such as commercial success or long-felt but unsolved needs).

²⁸ Compare 35 U.S.C. § 102(a) (1952 Act), with 35 U.S.C. § 102(a) (2012) (AIA).

²⁹ See *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 267 (1851) (“[U]nless more ingenuity and skill in applying the old method of fastening the shank and the knob were required in the application of it to the clay or porcelain knob than were possessed by an ordinary mechanic acquainted with the business, there was an absence of that degree of skill and ingenuity which constitute essential elements of every invention.”).

³⁰ See *Graham*, 383 U.S. at 3–4 (“We have concluded that the 1952 Act was intended to codify judicial precedents embracing the principle long ago announced by this Court in *Hotchkiss*” (citation omitted)).

novel theoretical framework for defining when an invention is anticipated and when an invention is obvious. In essence, both of these doctrines ask whether the public was already in possession of the claimed invention, either actually (anticipation) or constructively (obviousness). If so, then the applicant should be denied a patent.³¹

This Article is the third in a series in which I have explored the role of possession in patent law. In the first, I explored the role of the patent disclosure in demonstrating that an applicant had possession of the relevant invention.³² I posited that patent law's enablement requirement—that the patent specification teaches the PHOSITA how to make and use the claimed invention—is the appropriate patent law analog to property's conception of possession.³³

In the second article, I further elaborated the manner in which “possession” operates as a lever for tailoring the scope of patent protection, addressing when technologies that arise after a patent issued should nevertheless be covered by the patent.³⁴ The law has developed an odd paradox: patent owners are more likely to obtain patent coverage for later-developed technology—that by definition they did not possess when they filed their application—than they were to get protection for things that would have been in their possession. I offered two ways to reconcile this paradox: patentees are entitled to such protection when the change in technology came from outside their field or when the disclosure of the relevant patent would enable later innovators to make and use the later-developed technology.³⁵

This Article builds on this earlier work by shifting the focus away from the patent document and the *ex post* consideration of patent scope and now turning to the *ex ante* state of the art and its relationship to possession. The possession-based theory of novelty and non-obviousness offers a unifying theory for prior-art based invalidity. Typically, the literature has focused on either novelty or non-obviousness separately; indeed, there has been scant

³¹ The possession lens, however, is not limited to the doctrines of novelty and obviousness: it also performs a theoretical basis for investigating what materials should count as “prior art,” i.e. what should be considered “known” when we are assessing the novelty and non-obviousness of an invention. I pursue this analysis in a separate work. See Timothy R. Holbrook, Possession and Patent Prior Art (unpublished manuscript) (draft on file with author).

³² See Holbrook, *supra* note 10, at 125.

³³ *Id.* at 146–47.

³⁴ See generally Holbrook, *supra* note 16, at 2, 7 (describing the resulting “possession paradox”).

³⁵ *Id.* at 36–45.

literature on the law of novelty.³⁶ As for the latter, much of the focus has been on obviousness as an *economic* standard, not a technical one.³⁷ In other words, patents are justified if the incentive of the patent is enough to induce actors to engage in innovative activities such that, but for the patent, the innovation would not have occurred. The possession-based approach affords a more robust, technologically rooted explanation for these doctrines that more accurately tracks the ways that technologists encounter patent law. As such, the proposed framework may help develop patent law norms that are more accessible to the law's intended audience—scientists, engineers, and other innovators.

This Article proceeds as follows. Part I provides a summary of the salience of possession in the context of property law, and the various academic theories and viewpoints that have explored the at-times maligned concept. It then turns its attention to the concept of possession in the patent context, elaborating on how it necessarily must be present in the system in order to properly allocate the patent rights among competing inventors. Part II then offers both a descriptive and prescriptive assessment of the law of novelty through the lens of possession. This evaluation suggests that a number of aspects of the current doctrine are wrong if possession is truly the correct metric for novelty. Part III then turns to looking at obviousness demonstrating possession. From this perspective, various inconsistencies in the law become apparent. This Article then explores whether these inconsistencies should be eliminated or whether they are justified on other policy grounds.

I. POSSESSION IN PROPERTY AND PATENT LAW

Possession has deep roots in property law, running all the way back to Roman law.³⁸ It has also engendered considerable debate about the appropriateness of the concept and what insights, if any, it actually provides. This Part explores the theoretical aspects of possession in property law. It then

³⁶ For one exception, see generally Sean B. Seymore, *Rethinking Novelty in Patent Law*, 60 DUKE L.J. 919 (2011) (exploring the notion of novelty in regards to patent law).

³⁷ See, e.g., Michael Abramowicz & John F. Duffy, *The Inducement Standard of Patentability*, 120 YALE L.J. 1590, 1596 (2011) (“This Article aspires . . . to revitalize the inducement standard as the touchstone for understanding and refining the obviousness doctrine.”); A. Samuel Oddi, *Un-Unified Economic Theories of Patents—The Not-Quite-Holy Grail*, 71 NOTRE DAME L. REV. 267, 316 (1996) (discussing the “inducement” theory of non-obviousness—“inventions that are obvious . . . do not need the patent system to be created”).

³⁸ See Thomas J. McSweeney, *Property Before Property: Romanizing the English Law of Land*, 60 BUFF. L. REV. 1139, 1160 (2012).

turns to a discussion of whether the concept of possession can and should inform patent law.

A. *The Role of Possession in Property Law*

Within the first few classes in property law, students invariably encounter the concept of possession, by discussing, for example, the now-discredited doctrine of discovery and conquest, or the seemingly minor squabble about who owns a fox pelt.³⁹ Students also explore how the concept of possession defines who is the finder of lost property, giving that person priority over the item relative to second comers.⁴⁰ The first to take possession of abandoned property becomes the owner of the item.⁴¹ The concept of possession also informs adverse possession, such as the requirement for occupancy that results in exclusive use that is open and notorious.⁴²

As *Pierson v. Post* demonstrates, though, the role of possession in establishing property rights, while pervasive, is fairly ill-defined.⁴³ Theorists have sought to explain the role of possession in property law.⁴⁴ For example, some have sought to explain the dynamic through the “Hawk–Dove” game,⁴⁵

³⁹ For an interesting historical exploration of this case, see generally Bethany R. Berger, *It's Not About the Fox: The Untold History of Pierson v. Post*, 55 DUKE L.J. 1089 (2006).

⁴⁰ See *Kalyvakis v. T.S.S. Olympia*, 181 F. Supp. 32, 36 (S.D.N.Y. 1960) (“And since it was found in a public place the finder would be entitled to it against all but the true owner.”).

⁴¹ See *id.* at 37 n.16 (“Abandoned property is owned by him who takes it into his ownership.” (citing *Foulke v. N.Y. Consol. R.R. Co.*, 127 N.E. 237, 238 (N.Y. 1920))).

⁴² See, e.g., *United States v. 115.128 Acres of Land, More or Less*, in Newark, 107 F. Supp. 868, 869–70 (D.N.J. 1952) (“Before adverse possession by one tenant in common against his cotenant can begin, the former must, by acts of the most open and notorious character, show clearly to the world and to all having occasion to observe the condition and occupancy of the property that his possession is intended to exclude and does exclude the rights of his cotenant.”).

⁴³ See Rose, *supra* note 1, at 77; Henry E. Smith, *The Elements of Possession*, in LAW AND ECONOMICS OF POSSESSION, *supra* note 2, at 65, 65 (“[T]he role possession plays—or should play—in the law has puzzled people for centuries.”).

⁴⁴ See generally Smith, *supra* note 43, at 67–69 (exploring the notion of possession).

⁴⁵ The Hawk–Dove game, sometimes referred to as the “Chicken” game, is

a payoff scheme that generates a characteristic order of preference for combinations of moves. The first choice for each player is to assert his claim (dominate or play Hawk) while the other yields (submits or plays Dove). Barring that, a player prefers to yield while the other does as well (that is both play Dove). Next in line is deferring to the other player (the Dove/Hawk combination). Dead last is the prospect of conflict, in which both assert their claim simultaneously. Because conflict results in the smallest gain or the greatest loss for each player compared to other combinations, it is best avoided.

Amy L. Wax, *Expressive Law and Oppressive Norms: A Comment on Richard McAdams's “A Focal Point Theory of Expressive Law,”* 86 VA. L. REV. 1731, 1732–33 (2000).

wherein the possessor is the hawk and the non-possessor is the dove.⁴⁶ Possession of the item is “a most salient focal point on which to coordinate the two players’ strategies.”⁴⁷

As Carol Rose has noted, however, treating the possessor as the hawk assumes that the possessor is in a better position to retain the property physically, which may not be the case.⁴⁸ Instead, it may be social norms that create deference, not sheer power, with respect to title for the property.⁴⁹ Rose views this role of possession as “a kind of communication, and the original claim to the property looks like a kind of speech, with the audience composed of all others who might be interested in claiming the object in question.”⁵⁰

Henry Smith takes a slightly different view of possession, arguing that it “serves as a first cut at legal ontology in an overall modular architecture of property.”⁵¹ In order to coordinate uses of items, there must be a mechanism to establish the relationships between persons and things. He highlights that “general norms of possession are in rem” focusing on the “thing,” not the person.⁵² Because rights as to the thing apply to all others generally, there is a need to communicate the status of the object to third parties.⁵³ “[P]ossession is the basic module, in the sense of a regime connecting persons to objects for purposes of rights availing against others.”⁵⁴ It is upon this basic building block that layers of formal law relating to title begin to evolve, displacing possession concepts when they prove inadequate.⁵⁵ This role as a basic module—“the ultimate default”—explains why possession persists in the common law.⁵⁶

⁴⁶ See Rose, *supra* note 2, at 41–42; Smith, *supra* note 43, at 70; see also ROBERT SUGDEN, *THE ECONOMICS OF RIGHTS, CO-OPERATION AND WELFARE* 162 (Palgrave Macmillan, 2d ed. 2004) (1986).

⁴⁷ Rose, *supra* note 2, at 42.

⁴⁸ See *id.* at 45–46.

⁴⁹ *Id.* at 46 (“Thus, the realist version of possession as Hawk/Dove rests ultimately on physical control by the holder, whereas property *title* depends on the willingness of others to recognize the holder as legitimate.”); see also *id.* at 49 (“[P]hysical control itself depends heavily on the acquiescence of the surrounding community.”).

⁵⁰ Rose, *supra* note 1, at 78–79.

⁵¹ Smith, *supra* note 43, at 65.

⁵² *Id.* at 67.

⁵³ *Id.* at 68 (“Possession both secures use and announces rights to others by defining things in such a way that those who can most affect the mean return from a collection of valued attributes—the emergent thing—are assigned possessory rights.”).

⁵⁴ *Id.* at 80.

⁵⁵ See *id.* at 89.

⁵⁶ See *id.*

Notwithstanding the debates surrounding possession in the context of property law, one can discern a number of aspects common in all of the characteristics of possession. Possession involves some sort of communication or signal to third parties, communicating that someone is asserting ownership over the item in dispute.⁵⁷ The public-notice aspect of possession explains why acts of possession at common law often required some sort of external act, providing notice to third parties that the possessor is exercising her dominion over a given item.⁵⁸ In other words, possession means “acting like an owner.”⁵⁹

The famous case *Haslem v. Lockwood*⁶⁰ is illustrative. The dispute involved ownership of manure that was the property of “the travelers whose animals dropped it” but was “immediately abandoned,” free to be owned by another.⁶¹ The plaintiff had scraped the manure from the road into piles; he then left the piles to find means to transport them.⁶² Before he could return, the defendant removed the piles.⁶³ The plaintiff prevailed.⁶⁴ The case exemplifies the public notice aspect of possession because, by gathering the manure into piles, the plaintiff had “changed its original condition and greatly enhanced its value,” sending a message to third parties that someone had exercised dominion over the item.⁶⁵ In other words, it was clear that someone had taken possession of the manure, even though that “someone” was absent.

All of the various views of possession emphasize the importance of public notice. There is some act that communicates to third parties the interest by the possessor—or at least that the third party does not have an interest in the property. Rose, however, suggests a second requirement—some affirmative use of the property.⁶⁶ The possessor must act “like an owner” by using the property as one would expect. In adverse possession, this explains the requirement for exclusive use of the property. The *Haslem* case is similar because the property owner was attempting to appropriate the manure to monetize it.

⁵⁷ See Rose, *supra* note 2, at 50 (“[L]egal possession consists of signals—signals that the claimant intends to do something (though it is not clear what) with the thing claimed.”).

⁵⁸ See Rose, *supra* note 1, at 81 (“Possession as the basis of property ownership, then, seems to amount to something like yelling loudly enough to all who may be interested.”).

⁵⁹ Rose, *supra* note 2, at 55.

⁶⁰ 37 Conn. 500 (1871).

⁶¹ *Id.* at 506.

⁶² *Id.* at 503.

⁶³ *Id.* at 506.

⁶⁴ *Id.* at 507.

⁶⁵ *Id.* at 506.

⁶⁶ Rose, *supra* note 2, at 49.

The question remains, then, whether these aspects of possession have any salience in the patent context. This Article explore these two possible requirements—an act to communicate ownership to third parties, and the requirement to act like an owner—in the next section, agreeing with the former but rejecting the latter both in property law terms and with respect to patent law.

*B. Can Possession Inform Patent Law?*⁶⁷

Given the somewhat ambiguous nature of possession in property law, one might question the propriety of importing this conception into patent law. Indeed, Rose has cautioned against this dynamic, given the intangible nature of intellectual property rights:

Somewhat similar is the idea of possession in connection with intellectual property. Here, too, the legal property right is abstract. For the holder of intellectual property, the distinctive signals of “acting like an owner” generally mean little more than the holder’s effort to keep others from using this very abstract right. However, use, not exclusion, lends normative weight to acting like an owner, whereas the intellectual property claimant’s perceived assertions of ownership consist largely of excluding use by others, even when their use damages no resource. We should not be surprised that respect for intellectual property is correspondingly somewhat diminished; people who would not dream of stealing an unlocked bicycle will gleefully hack away at the applications on a game console.⁶⁸

Rose is correct, of course, about the intangible aspect of intellectual property. Asserting control over the intangible right is very different from taking possession of a physical item, such as land or personal property.

The analysis, however, focuses on utilizing an existing right and not on the steps required to obtain those rights. For inventors, the patent is not about something intangible but, instead, is about a very concrete thing—their invention.⁶⁹ We translate that invention into the patent document, and we divorce the right from the thing the inventor created. Nevertheless, we do have to tie the patent right to something that had its genesis in the inventor’s mind,

⁶⁷ Of course my answer is going to be “yes,” or else this would be a very short article.

⁶⁸ Rose, *supra* note 2, at 61.

⁶⁹ See Jeanne C. Fromer, *Expressive Incentives in Intellectual Property*, 98 VA. L. REV. 1745, 1771–78 (2012) (discussing personhood dynamics for inventors).

and potentially her hands.⁷⁰ It is this translation step that creates much of the headache in patent law, particularly in terms of public notice. But it is a necessary aspect of the system—finding a way to capture the “invention” in the patent document.⁷¹

Turning to the requirements for possession articulated above, inventors must satisfy those two conditions of a communicative act and an affirmative act demonstrating utilization of the invention. These requirements track well with patent law. As to the first, patent applications must contain a written description of what the applicant views as the invention in sufficient detail to enable a PHOSITA to make and use the invention.⁷² The patent also must contain claims that delineate the outer bounds of the invention.⁷³ The patent disclosure, coupled with the claims, performs the requisite communicative act. As a publicly available document, third parties are free to consult the patent in order to ascertain what the patent owner has asserted to be the invention and the scope of patent. In this way, the patent document demonstrates to third parties what the inventor “possessed” as her invention.

But what about the second proposed requirement, that the possessor “act like an owner” by using the item? Superficially, one could shoehorn patent law to satisfy this requirement. Patent rights do not come into existence merely through creation of the invention. An inventor must affirmatively seek protection by filing an application at the USPTO. Such applications require an expenditure of resources—time, effort, and money—which correlates to the second condition of possession. There is an affirmative act to confirm an intent to utilize the invention, even though there is no affirmative obligation to practice the invention.⁷⁴ The inventor nevertheless has satisfied the second requirement for “acting like an owner” by taking the step of filing the patent application.

⁷⁰ Liivak, *supra* note 11, at 59 (“For some, the invention is a very narrow concept tied directly to the actual physical thing made by the inventor.”).

⁷¹ *See, e.g., id.* at 58 (“Modern patent law has mistakenly allowed patent claims to be seen as direct delineations of a patent’s boundaries rather than as linguistic tools for ‘pointing out and distinctly claiming the subject matter which the applicant regards as his invention.’ In other words, we have lost sight of the invention—the substantive technical solution created by the inventor.” (quoting 35 U.S.C. § 112 (2006))).

⁷² 35 U.S.C. § 112(a) (2012) (AIA).

⁷³ *Id.* § 112(b); *see In re Vamco Mach. & Tool, Inc.*, 752 F.2d 1564, 1577 n.5 (Fed. Cir. 1985) (likening patent disclosures to the descriptions of land in property deeds).

⁷⁴ Tackling the larger issue in this Article—whether anticipation and obviousness should be viewed as showing that the public was in possession of the invention—then one would think there is some sort of expectation or potential for the public at large to utilize the invention, satisfying the second condition.

Rose's analysis, however, suggests that the second requirement demands something more: actual use of the item by the party asserting property rights.⁷⁵ The mere communication to third parties of dominion is not enough unless the potential possessor utilizes the resource in some manner akin to the way a typical owner would use it.

The suggestion that, for there to be possession, actual use is always required goes too far, however, in both the property and patent context. In property, we do not always require actual use for someone to have taken possession of the item.⁷⁶ Various versions of constructive possession belie an actual use requirement. For example, owners of land with wild animals on their property do not have to utilize the animal, yet the animal is considered to be the land owner's property so long as it remains on her land.⁷⁷ This is true even if the land owner ultimately does nothing with the animal. The same arises with other forms of constructive possession, such as trapping or even mortal wounding, per *Pierson v. Post*.⁷⁸ We do not inquire ultimately what the possessor does with, for example, the fox. Even with actual possession of abandoned property, which confers ownership to the finder, there is no obligation on the part of the finder to utilize the resource: the finder is free to stick the resource in a safe or even bury it, never to be utilized again.⁷⁹ Once property rights are assigned, rarely do we inquire further as to whether the property owner is using the resource in a way we deem socially desirable.

Only in the context of adverse possession is there an affirmative obligation to use the resource before we assign (or, in that case, transfer without consent) property rights.⁸⁰ But even in that context, variations of constructive possession suggest that there need not be such use. Aspects of the doctrine of color of title permit adverse possession of land beyond the area of actual use,

⁷⁵ See Rose, *supra* note 2, at 48–49.

⁷⁶ See generally Oskar Liivak & Eduardo M. Peñalver, *The Right Not to Use in Property and Patent Law*, 98 CORNELL L. REV. 1437 (2013) (discussing general rule that owners need not use property unless nonuse harms others).

⁷⁷ Michael C. Blumm & Lucas Ritchie, *The Pioneer Spirit and the Public Trust: The American Rule of Capture and State Ownership of Wildlife*, 35 ENVTL. L. 673, 688 (2005) (“On the eve of the American Revolution, English common law granted landowners a constructive right *ratione soli* to all wild animals on their property that was superior to that of a trespasser.”).

⁷⁸ See 3 Cai. R. 175, 178 (N.Y. Sup. Ct. 1805).

⁷⁹ See *Haslem v. Lockwood*, 37 Conn. 500, 506 (1871). Nowhere in this decision does the court suggest that possession was incomplete if, after collecting the manure, the plaintiff did nothing with it. Cf. Liivak & Peñalver, *supra* note 76, at 1453–58 (discussing right not to use property and its limits).

⁸⁰ See, e.g., *Van Valkenburgh v. Lutz*, 106 N.E.2d 28, 29 (1952) (requiring “evidence showing that the premises were cultivated or improved sufficiently to satisfy the statute” for adverse possession).

and some jurisdictions permit adverse possession beyond the area of actual use if the adverse possessor has erected a fence.⁸¹ The earning theory of adverse possession—that the adverse possessor has earned the land by improving it—emphasizes the use requirement.⁸² In contrast, a sleeping theory—that the owner has forfeited her rights through inaction in the face of a conspicuous trespasser—would suggest that the use requirement is primarily about the notice, allowing the true owner to realize that someone is on her property whom the owner should eject.⁸³

In this regard, in the patent context, the suggestion that there is a requirement to utilize the item at issue harkens to long-rejected “working requirements.”⁸⁴ In some countries, there was an affirmative obligation on the patent owner to practice the invention domestically; failure to practice the invention within the country would result in forfeiture of the patent.⁸⁵ Such countries wanted to encourage development within their borders instead of relying solely on imports from patent owners.⁸⁶ In this way, working requirements act as an *ex post* obligation to “act like an owner,” per Rose’s argument, and actually use the invention.

Working requirements have fallen out of favor and, indeed, are no longer permitted under international law.⁸⁷ Instead, countries may offer compulsory

⁸¹ See, e.g., *id.* (allowing adverse possession where “premises . . . are protected by a substantial inclosure”); see *Faulks v. Schrider*, 114 F.2d 587, 590–92 (D.C. Cir. 1940) (discussing various laws on “possession by inclosure”).

⁸² See Alexandra B. Klass, *Response Essay: The Personhood Rationale and Its Impact on the Durability of Private Claims to Public Property*, 103 GEO. L.J. ONLINE 41, 45 n.28 (2014), <http://georgetownlawjournal.org/files/2014/10/Klass-Personhood.pdf> (“[U]nder the earning theory, an adverse possessor builds a claim to the land because he or she has made productive use of the land in a way that benefits society.”).

⁸³ Kristine S. Cherek, *From Trespasser to Homeowner: The Case Against Adverse Possession in the Post-Crash World*, 20 VA. J. SOC. POL’Y & L. 271, 282 (2012) (“Under the sleeping theory, adverse possession acts as a penalty or punishment for those who ‘sleep’ on their rights by failing to make productive use of their real property.”).

⁸⁴ Sarah R. Wasserman Rajec, *Evaluating Flexibility in International Patent Law*, 65 HASTINGS L.J. 153, 164 n.46 (2013).

⁸⁵ *Id.*; see also Ted Sichelman, *Commercializing Patents*, 62 STAN. L. REV. 341, 394 (2010) (“Another widely suggested reward-style approach to encouraging commercialization is mandating a ‘working requirement’—namely, a condition that the patentee commercialize its invention or forfeit its rights.”).

⁸⁶ See Camilla A. Hrdy, *State Patents as a Solution to Underinvestment in Innovation*, 62 U. KAN. L. REV. 487, 517 (2013) (“[T]hese nations may use local working requirements and compulsory licensing to ensure that new technologies enter local markets and benefit local industries.”).

⁸⁷ See J.H. Reichman, *Beyond the Historical Lines of Demarcation: Competition Law, Intellectual Property Rights, and International Trade After the GATT’s Uruguay Round*, 20 BROOK. J. INT’L L. 75, 102 (1993).

licenses when a patent holder is not providing the technology to the country.⁸⁸ In the United States, failure to practice the invention becomes relevant in determining whether a permanent injunction is an appropriate remedy.⁸⁹ So, Rose is correct that there is no affirmative obligation to use the invention covered by the patent.⁹⁰

A use requirement in the patent context could take a weaker form for demonstrating possession than suggested by Rose. For example, an assignment of rights would create an expectation that the invention will be utilized, which could be viewed as sufficient. We generally expect property owners to do *something* with the resource, although it is not required. If the use requirement, therefore, is merely an expectation, then the possession-related doctrines make sense. Patent law generally satisfies that expectation—we do expect (or hope) that patent owners will utilize their invention. Moreover, because the public is the ultimate beneficiary of patent law, we also expect that the *public* will eventually utilize the invention once the patent expires.⁹¹ This temporal dynamic does provide a different perspective on the nature of patent rights vis-à-vis traditional property.

Possession, at the abstract level, is clearly relevant to patent law, and it can satisfy the two conditions established in the theory of possession found in real and personal property, even though the requirement for “use” seems tenuous. More concretely, as I have previously argued, the channeling of information to demonstrate what the inventor possessed into the patent document provides the most persuasive explanation for why patent applicants must disclose their inventions.⁹² In particular, the obligation for patent applicants to enable the PHOSITA to make and use the invention—the enablement requirement—is the best metric for assessing whether the patent applicant has demonstrated adequately that she was in possession of the invention claimed in the patent. The disclosure channels information regarding the applicant’s invention into a publicly available document that communicates what the inventor believes she

⁸⁸ *Id.*

⁸⁹ See *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 396–97 (2006) (Kennedy, J., concurring) (noting industry where “firms use patents not as a basis for producing and selling goods but, instead, primarily for obtaining licensing fees,” so injunction may not be appropriate).

⁹⁰ This assumes the patent holder is free to practice her own invention. Such practice may be proscribed by law or regulation, or the holder may be blocked by an earlier patent.

⁹¹ See *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 186–87 (1933) (“An exclusive enjoyment is guaranteed him for seventeen years, but upon the expiration of that period, the knowledge of the invention enures to the people, who are thus enabled without restriction to practice it and profit by its use.”).

⁹² See Holbrook, *supra* note 10, at 147.

possessed as her invention, thus providing greater public notice about the scope of her exclusive rights.⁹³ Indeed, the test for the sufficiency of the written description of the invention is whether the patent demonstrates that the applicant was in possession of the full scope of the patent claims at the time she filed her application.⁹⁴

Moreover, unlike property law, patent law encounters issues of “possession” on a daily basis, making it far more prominent and important. If possession is the “origin” of property, it seems a bit attenuated in the real property context now. Rarely do we encounter a situation where there truly is an unowned resource that we award to the first to possess. That is not the case, however, with patent law. With every patent issuance, we are creating new property rights, and those rights are awarded to whomever wins the relevant race.

Just as with real property, inventors must win the appropriate “race” to be awarded the property right. Under the 1952 Patent Act, the first to invent (with some exceptions) received the patent.⁹⁵ Under the AIA, the first inventor to file a patent application (with some exceptions) receives the patent.⁹⁶ To draw these lines among competing inventors, one must have a basis of assessing what inventions those applicants possessed. Thus, the concept of possession has a natural salience in patent law, notwithstanding the intangible aspect of the patent rights.

Patents differ from real property in another significant manner, however. With tangible items, the race to be the first to possess involves a physical item. The competition, thus, is just between various possible persons. That is not the case with patents. Regardless of whether our patent system is a first-to-invent or a first-inventor-to-file system, an inventor’s ability to obtain a patent is necessarily relative: she has to prove that she is the “first” (either to invent or file) vis-à-vis not only a competing applicant but also the state of the art. The invention must be novel and non-obvious in light of what is already publicly

⁹³ *Id.* at 128, 147.

⁹⁴ *See* *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). I view this “possession” test as inadequate and argue that the enablement doctrine is the best way to demonstrate possession. Holbrook, *supra* note 10, at 161–63 (arguing that enablement, not written description, best demonstrates possession of the invention).

⁹⁵ 35 U.S.C. § 102(a), (g) (2006) (1952 Act).

⁹⁶ 35 U.S.C. § 102(a)–(b) (2012) (AIA).

known. In other words, the “public”⁹⁷ must not already be in possession of the invention (either at the time of invention or at the time of the application, under the 1952 Patent Act or the AIA, respectively). If the public already was in possession of the invention, then no one gets the patent.

This view of assessing whether the public is in possession of the invention tracks with the Supreme Court’s articulation of the right of the public to copy items in the public domain.⁹⁸ This rhetoric is most closely associated with the right of the public to use a patented invention post-expiration, but the Supreme Court stated that the public is also free to use “potentially patentable ideas which are fully exposed to the public.”⁹⁹ While courts have tried to limit the idea of a “right to copy,”¹⁰⁰ and even the Supreme Court has stepped back from such language to some extent,¹⁰¹ the right to copy idea shows that patentability is tied to the conception of the public possessing the invention.

There remains the need, therefore, to evaluate the prior-art-based validity doctrines through the lens of possession. The doctrines of novelty and non-obviousness require that the patent cover only certain types of inventions—those that have significantly advanced the state of the art. In other words, the patent application must be compared to what is already known in the public. Just as acts of possession for an owner must communicate to the public that the object is already accounted for, so must the prior art. The next Part explores anticipation (the converse of novelty) as a possession-related doctrine, and then Part III considers obviousness as a form of constructive possession.

II. PATENT ANTICIPATION AS POSSESSION BY THE PUBLIC

Consideration of the concept of possession in the patent law context offers some important insights. Unlike the race to be the first among competing claimants to possess an item, patent law requires a race not only among

⁹⁷ Who the relevant “public” is for patent law can be a challenge to discern. *See* Mark D. Janis & Timothy R. Holbrook, *Patent Law’s Audience*, 97 MINN. L. REV. 72, 86–89 (2012).

⁹⁸ *See* *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 165 (1989).

⁹⁹ *See id.* (“For almost 100 years it has been well established that in the case of an expired patent, the federal patent laws *do* create a federal right to ‘copy and to use.’ *Sears* and *Compco* extended that rule to potentially patentable ideas which are fully exposed to the public.”).

¹⁰⁰ *See, e.g.,* *Leatherman Tool Grp. v. Cooper Indus., Inc.*, 131 F.3d 1011, 1014–15 (Fed. Cir. 1997) (denying declaratory judgment standing on basis of right to copy).

¹⁰¹ *See* *TrafFix Devices, Inc. v. Mktg. Displays, Inc.*, 532 U.S. 23, 35 (2001) (declining to hold that the Constitution “prohibits the holder of an expired utility patent from claiming trade dress protection”). If the Court believed in a robust form of a right to copy, it could have adopted such a rule.

competing inventors but also against the state of the art—the public in other words. This Part explores the first doctrine that polices this “race,” anticipation, and how the two salient aspects of possession—public notice and potential utilization—inform those doctrines. Ultimately, it concludes that the anticipation doctrine is currently flawed by requiring the invention to be disclosed “as arranged in the claim”¹⁰² and by allowing anticipation in contexts where the invention is actually unknown to the public.

A. The Identity and Enablement Requirements Confirm Possession-Based Aspect of Novelty

The relationship between possession and validity is most readily seen in the doctrine of anticipation. To be patentable, an invention must be “new” or novel;¹⁰³ if the invention is not novel, it is said to be anticipated by the prior art.¹⁰⁴ Anticipation, therefore, is the converse of novelty.

Anticipation is a strict legal concept in patent law. To demonstrate that an invention lacks novelty, a challenger has to show that each and every limitation of the relevant claim in the patent is disclosed in a single prior art reference, such as an earlier patent or a previously published scientific article.¹⁰⁵ In other words, the invention must be revealed to the public in its entirety in a single disclosure. If one of ordinary skill would have to combine various prior art references, such as multiple patents or publications, to arrive at the claimed invention, then by definition the invention is not anticipated. This requirement is known as the “strict identity” requirement.¹⁰⁶

For example, assume that an applicant is applying for a patent on a bacon, lettuce, and tomato (BLT) sandwich. There is a cookbook that discloses having a sandwich with bacon and lettuce, but no tomato. A newspaper article on

¹⁰² *Finisar Corp. v. DirecTV Grp.*, 523 F.3d 1323, 1334–35 (Fed. Cir. 2008) (emphasis omitted).

¹⁰³ 35 U.S.C. § 101 (2012) (AIA).

¹⁰⁴ *Seymore*, *supra* note 36, at 923–24.

¹⁰⁵ *See ClearValue, Inc. v. Pearl River Polymers, Inc.*, 668 F.3d 1340, 1344 (Fed. Cir. 2012) (citing *Am. Calcar, Inc. v. Am. Honda Motor Co.*, 651 F.3d 1318, 1341 (Fed. Cir. 2011)).

¹⁰⁶ *See Trintec Indus., Inc. v. Top-U.S.A. Corp.*, 295 F.3d 1292, 1296 (Fed. Cir. 2002); *Seymore*, *supra* note 36, at 922–23. There are additional complexities to the rule. For example, if a claim covers a genus of embodiments, then such a claim is anticipated if the prior art reference discloses any species within that genus. *See Eli Lilly & Co. v. Barr Labs., Inc.* 251 F.3d 955, 971 (Fed. Cir. 2001). In contrast, a claim to a species is not necessarily anticipated by a prior art reference that discloses the genus if the species has unique characteristics that differentiate it from the genus. *See Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1262 (Fed. Cir. 1989) (“Under Sumitomo’s theory, a claim to a genus would inherently disclose all species. We find Sumitomo’s argument wholly meritless . . .”).

cuisine discloses a sandwich with just tomatoes. The applicant's claim would not be anticipated because the BLT is not described completely in either the cookbook or in the cuisine article. The BLT could be considered obvious, however, because one could combine the teachings of the two articles to yield the BLT. Combining references in this way is the province of the non-obviousness requirement.¹⁰⁷

In addition to the strict identity requirement, the prior art reference must enable one of ordinary skill in the art to make the invention.¹⁰⁸ Merely disclosing all the limitations of the claim is not sufficient. The prior art reference must explain how to make the invention, which conclusively demonstrates that the public is in possession of this innovation.

For example, if a chemist publishes an article that shows the structure of a new molecule but fails to provide any details on how to synthesize it, then a later patent claiming the molecule would not be anticipated. We cannot say that the public was in possession of the molecule if the earlier chemist did not demonstrate how to make it.

This obligation is known as the enablement requirement for anticipation.¹⁰⁹ The requirement of an enabling disclosure for anticipation is where the role of anticipation as a measure of the public's possession of the claimed invention is most apparent.¹¹⁰ By requiring an enabling disclosure, anticipation doctrine essentially requires that the prior art reference put the public in possession of the invention.

Importantly, the measure of possession here is not whether the invention was *patent eligible* due to the state of the art. In other words, the test is not whether the prior art reference, if filed as a patent application, would be ready to issue as a patent. The invention in the prior art need not be ready for

¹⁰⁷ See 35 U.S.C. § 103(a) (2006) (1952 Act); 35 U.S.C. § 103 (2012) (AIA).

¹⁰⁸ See *ActiveVideo Networks, Inc. v. Verizon Commc'ns, Inc.*, 694 F.3d 1312, 1327 (Fed. Cir. 2012). This test differs from the disclosure obligation under 35 U.S.C. § 112(a), which requires a disclosure of how both to make and use the patented invention. See *In re Gleave*, 560 F.3d 1331, 1335 (Fed. Cir. 2009) (explaining enablement only as to make, not use, except for methods, where two merge). A patent disclosure must also enable the full scope of the claim in order to satisfy § 112(a). See, e.g., *Auto. Techs. Int'l, Inc. v. BMW of N. Am., Inc.*, 501 F.3d 1274, 1282 (Fed. Cir. 2007) ("Under the district court's construction, however, that full scope must be enabled, and the district court was correct that the specification did not enable the full scope of the invention because it did not enable electronic side impact sensors."); see Sean B. Seymore, *The Enablement Pendulum Swings Back*, 6 NW. J. TECH. & INTELL. PROP. 278, 279 (2008).

¹⁰⁹ See *Rasmusson v. SmithKline Beecham Corp.*, 413 F.3d 1318, 1325 (Fed. Cir. 2005).

¹¹⁰ Cf. Seymore, *supra* note 36, at 931 ("[N]ovelty serves to safeguard the public's right to enjoy what it already possesses.").

patenting to anticipate a later patent application. Instead, the issue is whether the invention had been created, even if no one yet knows how to use the invention. The prior art must show how to make the invention, not necessarily how to use the invention.¹¹¹ An invention must have utility to be patentable, but the utility of the invention need not be stated in the prior art to demonstrate the public's possession.¹¹² The prior art reference must simply put the public in possession of the invention by teaching the world how to make the invention.

This language of possession vis-à-vis anticipation, however, does not originate with me. The courts have discussed anticipation in terms of possession. The Federal Circuit has linked possession and anticipation expressly:

[P]ossession of the invention adequate to show anticipation requires that a person of ordinary skill in the field of the invention would discern every element of the invention in the allegedly anticipating reference, and know how to carry it out based on the state of knowledge at the time of the reference.¹¹³

Other decisions have linked possession and anticipation, in essence noting that if the public is in possession of the claimed invention, then it is anticipated.¹¹⁴ Courts have long made this link, even as far back as 1893,¹¹⁵ with commentators linking the concept to property.¹¹⁶

¹¹¹ *Id.* (“The reason [the enablement requirement for anticipation differs from that under section 112] is that section 112 ‘provides that the specification must enable one skilled in the art to “use” the invention whereas [section] 102 makes no such requirement as to an anticipatory disclosure.’” (quoting *In re Hafner*, 410 F.2d 1403, 1405 (C.C.P.A. 1969) (second alteration in original))).

¹¹² This creates some tension with the on-sale bar of § 102(b) of the 1952 Act and the prior art prohibition of § 102(a) of the AIA. Under the 1952 Act case law, for an invention to be on sale, it must be ready for patenting, suggesting that the utility of the invention must also be known. *See Space Sys./Loral, Inc. v. Lockheed Martin Corp.*, 271 F.3d 1076, 1080–81 (Fed. Cir. 2001) (noting that conception alone is not required because further development may arise). I’ve argued that enablement and utility in this context should be treated differently. *See* Timothy R. Holbrook, *The More Things Change, the More They Stay the Same: Implications of Pfaff v. Wells Electronics, Inc. and the Quest for Predictability in the On-Sale Bar*, 15 BERKELEY TECH. L.J. 933 (2000) (discussing the reasons for differential treatment). I take up the question of the various categories of prior art, and their relationship to possession, in later work. *See* Holbrook, *supra* note 31.

¹¹³ *PharmaStem Therapeutics, Inc. v. ViaCell, Inc.*, 491 F.3d 1342, 1370 (Fed. Cir. 2007); *see also* *Eli Lilly & Co. v. Zenith Goldline Pharms., Inc.*, 471 F.3d 1369, 1375 (Fed. Cir. 2006) (“To anticipate, a prior art reference must place the inventive compound or composition in the possession of the public.” (citation omitted)).

¹¹⁴ *See, e.g., Dey, L.P. v. Sunovion Pharms., Inc.*, 715 F.3d 1351, 1359 (Fed. Cir. 2013) (“And here, a reasonable jury could conclude that if members of the public are not informed of, and cannot readily discern, the claimed features of the invention in the allegedly invalidating prior art, the public has not been put in

The requirement for an enabling disclosure generally applies to prior art in the form of some sort of written instrument, such as a printed publication, previous patent, or even a document used in offering to sell the invention.¹¹⁷ Real-world acts—such as public uses of, or attempts to sell, the invention—also serve as prior art.¹¹⁸ In this latter context, possession is clear: the invention actually exists in physical form. Thus, the invalidating demonstration of possession can take two forms—in writing and in kind.¹¹⁹ To anticipate, therefore, the public must be in possession of the invention either through an enabling description of the invention or by a physical instantiation of it.

Importantly, although there needs to be public access to the invention, the public does not have to realize that the product is in fact inventive.¹²⁰ This

possession of those features.”); *In re Elsner*, 381 F.3d 1125, 1128 (Fed. Cir. 2004) (“Prior art under § 102(b) must sufficiently describe a claimed invention to have placed the public in possession of that invention.”); *In re Epstein*, 32 F.3d 1559, 1568 (Fed. Cir. 1994); *Paperless Accounting, Inc. v. Bay Area Rapid Transit Sys.*, 804 F.2d 659, 665 (Fed. Cir. 1986); *In re Donohue*, 766 F.2d 531, 533 (Fed. Cir. 1985); *In re Wyer*, 655 F.2d 221, 226 (C.C.P.A. 1981) (“[T]he printed publication provision was designed to prevent withdrawal by an inventor . . . of that which was already in the possession of the public.”); *In re Samour*, 571 F.2d 559, 563 (C.C.P.A. 1978) (“The critical issue under 35 U.S.C. § 102(b) is whether the claimed subject matter was in possession of the public more than one year prior to applicant’s filing date”); *In re Coker*, 463 F.2d 1344, 1348 (C.C.P.A. 1972) (“[I]t cannot be said that the reference would have placed the public in possession of the invention.”); *In re Brown*, 329 F.2d 1006, 1011 (C.C.P.A. 1964) (“[T]he true test of any prior art relied on to show or suggest that a chemical compound is old, is whether the prior art is such as to place the disclosed ‘compound’ in the possession of the public.”); *In re LeGrice*, 301 F.2d 929, 939 (C.C.P.A. 1962) (“[S]ection 102(b) requires a determination of whether one skilled in the art to which the invention pertains could take the description of the invention in the printed publication and combine it with his own knowledge of the particular art and from this combination be put in possession of the invention”); *In re Omeprazole Patent Litig.*, 490 F. Supp. 2d 381, 510 (S.D.N.Y. 2007); *Phillips Petrol. Co. v. Ladd*, 219 F. Supp. 366, 370 (D.D.C. 1963) (“A mere naked formula for a chemical compound which teaches the art nothing about the product which it may represent, and does not put anyone in possession of the invention, is not the type of statement that should be relied upon for anticipation.”).

¹¹⁵ See *In re Appeal of Schaeffer*, 2 App. D.C. 1, 2 (D.C. Cir. 1893) (“A prior publication, in order to defeat a patent, must place the invention or discovery in the possession of the public as fully as if the art or instrument had been practically and publicly employed.”).

¹¹⁶ See 1 ROBINSON, *supra* note 8, at 38 (“The inventor, who voluntarily discloses his invention to the public, necessarily and freely dedicates it to the public; and that which formerly was his alone by virtue of his sole possession becomes by universal possession the common property of all mankind.”).

¹¹⁷ See *Pfaff v. Wells Elecs., Inc.*, 525 U.S. 55, 67–68 (1998) (allowing invention to be on-sale if there is an enabling diagram).

¹¹⁸ See 35 U.S.C. § 102(a), (b) (2006) (1952 Act); 35 U.S.C. § 102(a)(1) (2012) (AIA).

¹¹⁹ See *Pfaff*, 525 U.S. at 67–68. The on-sale bar of 1952 Patent Act and presumptively of § 102(a)(1) of the AIA are a bit of a hybrid. An invention can be on sale for purposes of the “on-sale bar” if the invention was either actually reduced to practice (so there is a working version) or there were enabling diagrams and descriptions of the invention. See *id.* See generally *Holbrook*, *supra* note 112, at 969–71.

¹²⁰ See *Elec. Storage Battery Co. v. Shimadzu*, 307 U.S. 5, 19–20 (1939); *Egbert v. Lippman*, 104 U.S. 333, 336 (1881); *In re Smith*, 714 F.2d 1127, 1134 (Fed. Cir. 1983) (“Public use’ of a claimed invention

correlates with the requirement in property-based possession theory that there be a communicative act demonstrating the assertion of ownership to third parties.¹²¹ Here, the communicative act is found by the requirement that the prior art be generally accessible to the public. So long as the invention is publicly accessible, then the use can destroy the novelty of a subsequently filed patent, even if the public is unaware of the invention itself. The public is free to practice the invention.

For example, if someone sells a photocopier with a patented lens system, the person using the copier likely has no idea of the inventive aspects of the lens. Nevertheless, this sale and use of the photocopier would destroy the novelty of any subsequent patent application.¹²² This dynamic is true for both public uses and offers to sell the patented invention: the public need not be aware of the invention itself to invalidate the patent. In contrast, truly secret uses, where the use of the invention is affirmatively suppressed or concealed from the public, cannot anticipate a later patent.¹²³

To the extent one agrees with Rose's view of possession, then there would also need to be an aspect of the public utilizing the invention for there to be possession. For public uses and sales activity, that requirement would be readily satisfied: a party is using the invention, disqualifying the applicant from obtaining a patent. Printed publications also could be viewed as utilizing the invention. Someone has taken the effort to describe the invention in an enabling fashion and then has published it in a way to make it accessible to the

under section 102(b) has been defined as any use of that invention by a person other than the inventor who is under no limitation, restriction or obligation of secrecy to the inventor.”)

¹²¹ See Rose, *supra* note 1, at 78–81.

¹²² Such uses have been called “non-informing” public uses, where the public is not “informed” of the invention but nevertheless has access (or at least is not legally prevented access) to the invention. See Ami Patel, Note, *Advocating a Totality of the Circumstances Test to Analyze a Non-Informing Use of an Invention*, 48 WAYNE L. REV. 1287, 1288 (2002) (“This means that the public may not determine the invention merely by looking at it. However, the invention is not ‘abandoned, suppressed, or concealed’ because, with some effort, the public may discern what it is.”).

¹²³ See *Invitrogen Corp. v. Biocrest Mfg., L.P.*, 424 F.3d 1374, 1382 (Fed. Cir. 2005); *Moleculon Research Corp. v. CBS, Inc.*, 793 F.2d 1261, 1266 (Fed. Cir. 1986). Under the 1952 Act, an inventor can lose the right to a patent if they sell the product of a process more than one year prior to filing an application for a patent on that process. See *Dippin’ Dots, Inc. v. Mosey*, 476 F.3d 1337, 1344 (Fed. Cir. 2007) (“The public sale of goods produced by a process more than one year before a patent is filed places that process in the § 102(b) prior art.”); see also *Metallizing Eng’g Co. v. Kenyon Bearing & Auto Parts Co.*, 153 F.2d 516, 518 (2d Cir. 1946) (establishing this rule that the Federal Circuit has relied upon). Such uses by third parties, however, do not constitute public uses. See *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1549 (Fed. Cir. 1983). There is some debate as to whether the *Metallizing* rule will apply under the AIA. See Mark A. Lemley, *Does ‘Public Use’ Mean the Same Thing It Did Last Year?*, 93 TEX. L. REV. 1119 (2015); Robert P. Merges, *Priority and Novelty Under the AIA*, 27 BERKLEY TECH. L.J. 1023, 1034–35 (2012).

public. Of course, I do not view utilization as a necessary aspect of possession, but, nevertheless, anticipation includes aspects of utilization of the invention.

Anticipation, therefore, reflects the presence of the concept of possession in patent law. If the public already possesses the invention, as demonstrated by an enabling disclosure, then no one is entitled to a patent.

B. Implications of Viewing Anticipation Through a Possession-Based Lens

Both forms of prior art—written disclosures and actual uses of the invention—demonstrate at an abstract level the importance of possession of the invention in determining whether the claimed invention is novel. Nevertheless, three developments in the anticipation doctrine have arisen that, when viewed through the lens of possession, are suspect. The next sections explore these three concerns: (1) the requirement that the prior art disclose not only all of the claim limits but also disclose those limits as arranged in the claim; (2) the lack of a need for recognition by one of ordinary skill in the art of an inherently present claim limitation; and (3) that enablement of the prior art reference can evolve over time, altering the import of a particular prior art disclosure. I consider each of these in turn.

1. The “As Arranged in the Claim” Requirement Is Unsupported by a Possession-Based Lens of Anticipation

The classic statement of the identity requirement is that a single prior art reference must disclose each and every claim limitation.¹²⁴ Recent cases, however, have grafted an additional requirement to the strict identity rule: the single reference must also disclose the claim limitations as arranged in the claim. Not all of the Federal Circuit cases note this additional requirement, potentially creating an intra-circuit split within the Federal Circuit.

The Federal Circuit appears to have first delineated this heightened obligation in *Finisar Corp. v. DirecTV Group*,¹²⁵ where the court suggested that “this court has long held that ‘[a]nticipation requires the presence in a single prior art disclosure of all elements of a claimed invention *arranged as in the claim.*’”¹²⁶ The patent in *Finisar* related to an information broadcast system

¹²⁴ See *Glaxo Inc. v. Novopharm Ltd.*, 52 F.3d 1043, 1047 (Fed. Cir. 1995) (citing 35 U.S.C. § 102(a) (1988)); *Kloster Speedsteel AB v. Crucible Inc.*, 793 F.2d 1565, 1571 (Fed. Cir. 1986).

¹²⁵ See 523 F.3d 1323 (Fed. Cir. 2008).

¹²⁶ 523 F.3d at 1334–35 (alteration in original) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1548 (Fed. Cir. 1983)).

that provided subscribers access to audio and video programs using high-speed satellite or cable links.¹²⁷ The relevant prior art was a textbook that undisputedly disclosed all of the limitations of the claimed system.¹²⁸ Reversing the district court, the Federal Circuit held that the textbook anticipated one of the claims because it disclosed not only all claim elements but also the particular “interrelationships between [the relevant] elements as claimed.”¹²⁹ The textbook described a mass-communication medium combining television, communications, and computer technologies.¹³⁰ The reference taught the division of portions of the database into tiers, the transmission of the information, and the assignment of scheduled transmission times to portions of the database within those tiers, therefore disclosing the “scheduling,” “transmitting,” and “dividing” steps in the patent claim.¹³¹ The court noted, however, that the real issue on appeal was “the interrelationships between these elements as claimed” in the claim at issue.¹³² The court ultimately concluded that the textbook did disclose those “interrelated requirements” and, as a result, the court held that the textbook anticipated the claim at issue.¹³³ As to the remaining claims, the court remanded the case for the district court to determine whether the textbook also disclosed all of the limitations as arranged in those claims.¹³⁴

Finisar is somewhat of an odd case for developing this new requirement. The court concluded that the conditions were met and the claim was anticipated. The better case would be one where, notwithstanding that the prior art disclosed all of the limitations of the claim, the claims were not anticipated for failure to disclose the particular arrangement of those limitations. Arguably, the new standard is dictum because the articulation of the refined rule was not necessary to the decision.

The Federal Circuit nevertheless continued to develop this added requirement in *Net MoneyIN, Inc. v. Verisign, Inc.*,¹³⁵ holding,

[U]nless a reference discloses within the four corners of the document not only all of the limitations claimed but also all of the

¹²⁷ *Id.* at 1327.

¹²⁸ *Id.* at 1335.

¹²⁹ *Id.*

¹³⁰ *Id.*

¹³¹ *Id.*

¹³² *Id.*

¹³³ *Id.* at 1338.

¹³⁴ *Id.*

¹³⁵ 545 F.3d 1359 (Fed. Cir. 2008).

limitations arranged or combined in the same way as recited in the claim, it cannot be said to prove prior invention of the thing claimed and, thus, cannot anticipate under 35 U.S.C. § 102.¹³⁶

One could view this language fairly narrowly. The court could mean that, when the order of the claim limitations is required for the invention to work, then failure of the prior art to disclose the proper arrangement of claim limitations results in a finding of no anticipation.¹³⁷ In other words, the order of the claim limitations could be necessary for the invention to work. If so, then the order is itself a limitation. The prior art would then have to disclose that precise arrangement to anticipate. Otherwise a particular limit (the sequence of steps) is missing from the prior art, violating the identity requirement.

The Federal Circuit, however, has never limited the doctrine in that fashion. Instead, they have applied it with even more rigor. In *Therasense, Inc. v. Becton, Dickinson & Co.*, the court concluded that the jury instructions at trial were legally flawed for failing to articulate this rule.¹³⁸ The instruction was that

it is not necessary that the prior-art reference expressly lay out the elements in the exact way laid out in the claim. . . . Rather, for anticipation, it is *sufficient* if the single reference would have informed those skilled in the art that all of the claimed elements *could have been arranged* as in the claimed invention.¹³⁹

The claims at issue here were for a manufacture, an electrode strip, not a method.¹⁴⁰ Nothing in the opinion suggests that the arrangement of the limitations in the claim was a necessary aspect of the device. Nevertheless, the Federal Circuit concluded that the instruction was legally erroneous. In the court's words, the claim is not merely a "catalog of separate parts"; therefore, the prior art must explain the "part-to-part relationships set forth in the claims and that give the claims their meaning."¹⁴¹ The court nevertheless affirmed the finding of invalidity but did so instead on obviousness grounds.¹⁴²

¹³⁶ *Id.* at 1371.

¹³⁷ Thanks to Mark Lemley for suggesting this perspective on the requirement. *See, e.g.*, *Loral Fairchild Corp. v. Sony Corp.*, 181 F.3d 1313, 1321–22 (Fed. Cir. 1999) (noting order of steps is separate limitation in this case).

¹³⁸ 593 F.3d 1325, 1332 (Fed. Cir. 2010).

¹³⁹ *Id.*

¹⁴⁰ *Id.* at 1328–29.

¹⁴¹ *Id.* (quoting *Lindemann Maschinenfabrik GmbH v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1459 (Fed. Cir. 1984)).

¹⁴² *Id.* at 1336–37.

The requirement that the prior art reference disclose all the limitations as arranged in the claim increasingly has teeth at the Federal Circuit.¹⁴³ Yet, the doctrinal origins of this requirement are themselves questionable. The court in *Finisar* cited *Connell v. Sears, Roebuck & Co.* to support this additional requirement.¹⁴⁴ The issue in *Connell*, however, was obviousness, not anticipation.¹⁴⁵ Indeed, *Connell* is clearly an effort by the Federal Circuit to unify the disparate approaches to anticipation and obviousness that existed in the regional circuits.¹⁴⁶ Obviousness under 35 U.S.C. § 103¹⁴⁷ prevents an applicant from getting a patent on an invention that is a trivial advance in the state of the art. As such, obviousness does not require the entirety of the invention to be disclosed in a single reference. Instead, one can look at multiple references to assess whether the invention merits a patent. Nevertheless, the district court had conflated obviousness and anticipation by suggesting that “less than ‘complete anticipation’” was sufficient if the PHOSITA could “complete the work required.”¹⁴⁸ The district court also suggested that “it is sufficient for an anticipation ‘if the general aspects are the same and the differences in minor matters is only such as would suggest itself to one of ordinary skill in the art.’”¹⁴⁹ The Federal Circuit clarified that this statement of the law was incorrect, noting that “[t]hose statements relate to

¹⁴³ See, e.g., *SynQor, Inc. v. Artesyn Techs., Inc.*, 709 F.3d 1365, 1375 (Fed. Cir. 2013) (“In other words, even if the Mweene Thesis discloses each discrete element of each claim Defendants assert is anticipated, the thesis does not disclose those elements arranged as required by the claim.”). The Federal Circuit has continued to use this formulation of the anticipation standard. See *Carnegie Mellon Univ. v. Marvell Tech. Grp.*, 807 F.3d 1283, 1293 (Fed. Cir. 2015); *Cheese Sys., Inc. v. Tetra Pak Cheese & Powder Sys., Inc.*, 725 F.3d 1341, 1351 (Fed. Cir. 2013); *Crown Packaging Tech., Inc. v. Ball Metal Beverage Container Corp.*, 635 F.3d 1373, 1383 (Fed. Cir. 2011). The articulation of the rule has been inconsistent, however, with other cases making no reference to the “as arranged in the claim” requirement. See, e.g., *Allergan, Inc. v. Apotex, Inc.*, 754 F.3d 952, 958 (Fed. Cir. 2014); *K-TEC, Inc. v. Vita-Mix Corp.*, 696 F.3d 1364, 1377 (Fed. Cir. 2012).

¹⁴⁴ 722 F.2d 1542 (Fed. Cir. 1983).

¹⁴⁵ See *id.* at 1548.

¹⁴⁶ For example, some regional circuits noted that “[a]lthough disclosures of the prior art may fall short of ‘complete anticipation,’ anticipation may be found where such complete anticipation only requires that one of ordinary skill in the art exercise that skill to complete the work.” *Ludlow Corp. v. Textile Rubber & Chem. Co.*, 636 F.2d 1057, 1059 (5th Cir. 1981); see also *Deep Welding, Inc. v. Sciaky Bros.*, 417 F.2d 1227, 1234 (7th Cir. 1969) (“[W]hile it is preferable that ‘all of the elements of the patented device or their equivalents . . . be found in a single prior device,’ it is sufficient for anticipation ‘if the general aspects are the same and the difference in minor matters is only such as would suggest itself to one of ordinary skill in the art.’” (alteration in original) (quoting *Amphenol Corp. v. Gen. Time Corp.*, 397 F.2d 431, 437–38 (7th Cir. 1968))). These statements of the law of anticipation were rejected by the Federal Circuit in *Connell*. See *Connell*, 722 F.2d at 1548 (“Those statements relate to obviousness, not anticipation. . . . A prior art disclosure that ‘almost’ meets that standard may render the claim invalid under § 103; it does not ‘anticipate.’”).

¹⁴⁷ See *infra* Part III.

¹⁴⁸ *Connell*, 722 F.2d at 1548 (quoting the district court opinion without citation).

¹⁴⁹ *Id.*

obviousness, not anticipation.”¹⁵⁰ Because of the identity requirement, “[a] prior art disclosure that ‘almost’ meets that standard may render the claim invalid under § 103; it does not ‘anticipate.’”¹⁵¹

This reasoning has nothing to do with the standard for anticipation; instead the court was merely distinguishing anticipation from obviousness. The court was not confronting the circumstance where all the limitations were present but not arranged properly; instead, all of the limitations were not present, so reliance on anticipation by the district court was legal error. The issue in the case was one of obviousness, not anticipation.

The court’s flawed chain of precedent continued, however. *Connell* cited *Soundsciber Corp. v. United States* for the requirement that the elements be “arranged as in the claim.”¹⁵² *Soundsciber* was decided by the U.S. Court of Claims, one of the predecessor courts to the Federal Circuit; the other was the U.S. Court of Customs and Patent Appeals (CCPA).¹⁵³ The decisions of those two courts are binding precedent on the Federal Circuit.¹⁵⁴ Just as in *Connell*, the Court of Claims was dealing with obviousness, not anticipation.¹⁵⁵ The only issue of anticipation in the case involved a potentially invalidating prior knowledge and use of the patented invention under 35 U.S.C. § 102(a).¹⁵⁶ The court found no anticipation on two bases: one of the claim limitations was missing from the documents supporting the earlier use, and, regardless, that use was not sufficiently accessible to the public to qualify as prior art.¹⁵⁷ Again, the case did not present the situation where all of the limitations were present but not arranged as claimed. Indeed, the court’s recitation of the legal standard for anticipation made no reference to a requirement that the prior art disclose the limitations as arranged in the claim.¹⁵⁸ As a result, both *Connell* and *Soundsciber* are inapt sources for grafting an extra requirement onto the identity rule of anticipation.

¹⁵⁰ *Id.*

¹⁵¹ *Id.*

¹⁵² *Id.* (citing *Soundsciber Corp. v. United States*, 360 F.2d 954, 960 (Ct. Cl. 1966)).

¹⁵³ *South Corp. v. United States*, 690 F.2d 1368, 1369 (Fed. Cir. 1982) (en banc).

¹⁵⁴ *Id.* (adopting the decisions of the Court of Customs and Patent Appeals and the Court of Claims as binding precedent).

¹⁵⁵ See *Soundsciber Corp.*, 360 F.2d at 960.

¹⁵⁶ *Id.*

¹⁵⁷ *Id.*

¹⁵⁸ *Id.* (“To constitute an anticipation, all of the elements recited in the claim or their equivalents must be found in one unit of the prior art.”).

The final authority relied upon by the Federal Circuit in support of this rule is *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.*¹⁵⁹ The court in *Therasense* cited to *Lindemann* for the “as arranged in the claim” requirement.¹⁶⁰ The court in *Lindemann* articulated anticipation as requiring the “disclosure of each and every element of the claimed invention, *arranged as in the claim.*”¹⁶¹ The court also cited *Connell* for this proposition, notwithstanding that *Connell* does not support such a requirement.¹⁶²

Regardless, the facts in *Lindemann* did not present the issue of whether the limitations in the prior art were arranged in the same fashion as in the claim. Instead, the court held that the identity rule was not satisfied because the prior art reference disclosed different structures, not a different arrangement.¹⁶³ As the court noted, “[T]he [prior art patent] discloses an entirely different device, composed of parts distinct from those of the claimed invention, and operating in a different way to process different material differently.”¹⁶⁴ When the court noted that claims are not “mere catalogs of separate parts,” it was not addressing the arrangement of the disclosed elements in the prior art; instead the court was discussing the stark differences between the claim at issue and the device disclosed in the prior art patent.¹⁶⁵ The court, alluding to the maxim of “that which infringes if later anticipates if earlier,”¹⁶⁶ noted that the prior art patent could not be viewed as infringing the claim at issue “had it come after

¹⁵⁹ 730 F.2d 1452 (Fed. Cir. 1984).

¹⁶⁰ See *Therasense, Inc. v. Becton, Dickinson & Co.*, 593 F.3d 1325, 1332 (Fed. Cir. 2010). And the *Lindemann Maschinenfabrik GmbH* court cited to *Connell*, which, as I demonstrated above, does not support the requirement. *Lindemann Maschinenfabrik GmbH*, 730 F.2d at 1458.

¹⁶¹ *Lindemann Maschinenfabrik GmbH*, 730 F.3d at 1458 (emphasis added).

¹⁶² *Id.*

¹⁶³ *Id.* at 1458–59. The court also used an antiquated version of anticipation by discussing “anticipation by equivalents.” *Id.*

¹⁶⁴ *Id.* at 1458.

¹⁶⁵ *Id.* at 1459.

¹⁶⁶ See, e.g., *Polaroid Corp. v. Eastman Kodak Co.*, 789 F.2d 1556, 1573 (Fed. Cir. 1986) (quoting *Peters v. Active Mfg. Co.*, 129 U.S. 530, 537 (1889)). This maxim is more appropriately phrased as “that which *literally* infringes if later anticipates if before.” As one district court correctly explained,

Literal infringement and anticipation mirror each other in the sense that that which literally infringes, if later in time, anticipates—and invalidates—if earlier. By contrast, infringement under the doctrine of equivalents is “if one wished to draw a parallel, . . . somewhat akin to obviousness.” That which, if later, would infringe not literally but under the doctrine of equivalents, if earlier might render a patent invalid as obvious—but not under a theory of anticipation.

Douglas Press, Inc. v. Arrow Int'l Inc., No. 95-C-3863, 1999 WL 35110172, at *11 (N.D. Ill. Feb. 4, 1999) (citation omitted) (quoting *Lewmar Marine, Inc. v. Bariant, Inc.*, 827 F.2d 744, 748 (Fed. Cir. 1999)).

the issuance” of the relevant patent.¹⁶⁷ For that reason, the district court improperly looked at the claim as a mere catalog of parts, not because the prior art failed to disclose the limitations as arranged in the claim. As a result, the earlier case law used to support this rule did not actually establish it nor did they address a fact pattern that squarely presented the issue.

So, why has the court adopted this rule? It could be another attempt by the Federal Circuit to create greater certainty by adopting a more formal rule.¹⁶⁸ Yet, the law of anticipation is already fairly bright-line: if one limitation is missing from the prior art reference, then the claim is not anticipated.

Perhaps this added requirement is an attempted end run around anticipation’s enablement requirement to avoid the complicated facts presented in that inquiry. An assessment of whether the prior art teaches how to make the claimed invention requires consideration of a large number of different facts.¹⁶⁹ The “as arranged” requirement thus could be viewed as an attempt by the Federal Circuit to create a bright-line rule.¹⁷⁰ If the prior art does not disclose the proper arrangement of the limitations in the claim, there is no need to engage in the rather messy enablement inquiry.

The “as arranged in the claim” requirement could be compared to the written description requirement for patent disclosures under § 112(a). In other words, the court is requiring more than enablement: the prior art must disclose the particular embodiment claimed. But, the written description requirement is not needed in this context. Written description in the patent disclosure context serves to ensure the applicant truly invented what is claimed at the time of the patent application and to limit the scope of broad, generic claims.¹⁷¹ In the anticipation context, there is not a concern about broad, generic prior art. The

¹⁶⁷ See *Lindemann*, 730 F.3d at 1459.

¹⁶⁸ See generally Timothy R. Holbrook, *The Supreme Court’s Complicity in Federal Circuit Formalism*, 20 SANTA CLARA COMPUTER & HIGH TECH. L.J. 1, 2 (2003) (noting “[t]he tendency towards crystal rules at the Federal Circuit transcends any particular issues in patent law”); John R. Thomas, *Formalism at the Federal Circuit*, 52 AM. U. L. REV. 771, 778 (2003) (stating that “patent jurisprudence has become increasingly oriented towards simple rules” and providing “five examples of the trend towards adjudicative rule formalism within the patent law”).

¹⁶⁹ See *Impax Labs., Inc. v. Aventis Pharms., Inc.*, 545 F.3d 1312, 1314–15 (Fed. Cir. 2008) (citing *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988)) (listing eight different factors relevant to enablement inquiry for anticipation); see also *In re Morsa*, 803 F.3d 1374, 1377–78 (Fed. Cir. 2015) (elaborating on facts to conclude prior art enabled the claimed invention).

¹⁷⁰ See Timothy R. Holbrook, *Substantive Versus Process-Based Formalism in Claim Construction*, 9 LEWIS & CLARK L. REV. 123, 127–28 (2005) (discussing various ways Federal Circuit has created bright-line rules in other areas).

¹⁷¹ *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1348, 1352–53 (Fed. Cir. 2010) (en banc).

rules are already clear: disclosure of a single species anticipates a claimed genus, and a claimed genus has the potential to invalidate a claimed species.¹⁷² The policy concerns underlying the written description requirement are simply not present in the novelty context. The court has noted the difference even in the enablement requirement for anticipation: “In other words, a prior art reference need not enable its full disclosure; it only needs to enable the portions of its disclosure alleged to anticipate the claimed invention.”¹⁷³

Thus, from a possession viewpoint, the “as arranged in the claim” requirement is an additional, unwarranted burden. If all of the limitations are present and the PHOSITA could make the invention based on the disclosure, then the invention is well within the possession of the public. Indeed, the “as arranged” requirement is in tension, if not inconsistent with, the enablement requirement: it would seem that if the disclosure is enabling, that would include placing the limitations in the proper order. The “as arranged in the claim” requirement thus is an unnecessary additional requirement that could inappropriately short-circuit the enablement inquiry. It is not warranted by the case law and certainly is superfluous from a possession-based perspective.

2. *Inherent Anticipation Requires Pre-Filing Recognition of the Element if the Disclosure Is a Patent or Printed Publication*

Another area where the possession-based view suggests current law is wrong is the doctrine of inherent anticipation. The test for novelty requires that each and every limitation of the claim be disclosed expressly or inherently in a prior art reference.¹⁷⁴ To be inherently disclosed, the limitation must be necessarily present in the piece of prior art.¹⁷⁵ Information extrinsic to the patent may be used to demonstrate the presence of the missing limitation, creating a slight exception to the “single reference” requirement.¹⁷⁶

¹⁷² See *Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1380 (Fed. Cir. 2001).

¹⁷³ *In re Antor Media Corp.*, 689 F.3d 1282, 1290 (Fed. Cir. 2012).

¹⁷⁴ See *Schering Corp. v. Geneva Pharms., Inc.*, 339 F.3d 1373, 1379 (Fed. Cir. 2003); Seymore, *supra* note 36, at 922–23.

¹⁷⁵ *Hansgirk v. Kemmer*, 102 F.2d 212, 214 (C.C.P.A. 1939) (“Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient. If, however, the disclosure is sufficient to show that the natural result flowing from the operation as taught would result in the performance of the questioned function, it seems to be well settled that the disclosure should be regarded as sufficient.” (citations omitted)); see also *In re Oelrich*, 666 F.2d 578, 581 (C.C.P.A. 1981).

¹⁷⁶ See *Cont’l Can Co. USA v. Monsanto Co.*, 948 F.2d 1264, 1268–69 (Fed. Cir. 1991).

This inherency doctrine has evolved to cover two different circumstances. In its first, least controversial form, inherency is merely a rule of supplementation: technical documents generally do not expressly restate information that is well known in a given technological field.¹⁷⁷ Such articles are written presuming that the reader will have an understanding of the fundamentals in a given field.¹⁷⁸ The PHOSITA, when reading such prior art, would recognize aspects of the invention as present even if not expressly stated. If anticipation required an express disclosure of every limitation, then the teaching of a given piece of prior art would be rather restrictive, resulting in many inventions being deemed novel even though the PHOSITA would have recognized the complete invention in the reference. From a possession-based viewpoint, this rule of supplementation is completely consistent: the PHOSITA would recognize that the author of the prior art reference disclosed all of the limitations of the claim, placing the public in possession of the invention.

Inherency has expanded beyond this initial, supplemental purpose. The second variation of the doctrine covers not only undisclosed information known to the PHOSITA but also results that necessarily flow from practicing the invention disclosed in the prior art reference. The law is clear, for example, that “[n]ewly discovered results of known processes directed to the same purpose are not patentable because such results are inherent.”¹⁷⁹ For example, in *Continental Can Company USA, Inc. v. Monsanto Co.*, the court concluded that a claim limitation could be inherently disclosed if the limitation was necessarily *produced* by the process in the prior art reference.¹⁸⁰ There, the issue was whether the prior art reference inherently disclosed that the ribs of

¹⁷⁷ See *id.* at 1269 (“This modest flexibility in the rule that ‘anticipation’ requires that every element of the claims appear in a single reference accommodates situations where the common knowledge of technologists is not recorded in the reference; that is, where technological facts are known to those in the field of the invention, albeit not known to judges.”)

¹⁷⁸ See *id.*

¹⁷⁹ *Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1376 (Fed. Cir. 2001); see *Verdegaal Bros. v. Union Oil Co. of Cal.*, 814 F.2d 628, 633 (Fed. Cir. 1987); *In re Oelrich*, 666 F.2d at 581 (“It is true that mere recitation of a newly discovered function or property, inherently possessed by things in the prior art, does not distinguish a claim drawn to those things from the prior art.”); *In re May*, 574 F.2d 1082, 1090 (C.C.P.A. 1978) (“While appellants have discovered a hitherto unknown property, to wit, nonaddictiveness, of the species disclosed by May, such discovery does not constitute a new use.”); *Hansgirk*, 102 F.2d at 214 (“Inherency, however, may not be established by probabilities or possibilities. . . . If, however, the disclosure is sufficient to show that the natural result flowing from the operation as taught would result in the performance of the questioned function, it seems to be well settled that the disclosure should be regarded as sufficient.”)

¹⁸⁰ 948 F.2d at 1268–69.

the bottom of a plastic container were hollow.¹⁸¹ The Federal Circuit concluded that summary judgment was inappropriate because the district court had presumed such inherency; instead, there was a genuine issue of material fact as to whether the disclosed process invariably yielded the claimed hollow rib.¹⁸²

Of course, this “inevitable result” variety of inherency is far different from simply asking whether a given limitation is inherently disclosed because it would be within the background knowledge of the PHOSITA. As a result, Mark Lemley and Dan Burk view inherency as “perhaps the most elusive doctrine in all of patent law,” having “confused and annoyed generations of law students.”¹⁸³ Instead, this approach mimics public use by asking what is the inevitable result of the prior art reference *assuming it is practiced*.¹⁸⁴ The PHOSITA may not know the answer to that question until she actually performs the method, as opposed to simply reading the prior art disclosure. Thus, simply reading the prior art reference may not be sufficient to comprehend the reference’s teachings fully; instead, one must practice the invention to discern what results will (or will not) inevitably flow.

The Federal Circuit has greatly expanded this latter approach to inherency beyond the inherent disclosure of a particular limitation in a claim. The Federal Circuit has made it clear that it is possible for a printed publication or patent to inherently disclose the *entire invention*. In *Schering Corp. v. Geneva Pharmaceuticals, Inc.*, the Federal Circuit held that a prior art patent inherently anticipated the entire claimed invention, the metabolite of a previously patented chemical.¹⁸⁵ Because the human body inevitably produced the claimed metabolite when a person ingested the previously patented drug, the court concluded the entire claim to the metabolite was inherently anticipated.¹⁸⁶ The court relied upon the symmetry between anticipation and literal infringement: “[T]hat which . . . literally infringe[s] if later in time

¹⁸¹ See *id.* at 1267–68.

¹⁸² See *id.* at 1269.

¹⁸³ Dan L. Burk & Mark A. Lemley, *Inherency*, 47 WM. & MARY L. REV. 371, 373 (2005).

¹⁸⁴ 35 U.S.C. § 102(b) (2006) (1952 Act); 35 U.S.C. § 102(a) (2012) (AIA); see *New Railhead Mfg., L.L.C. v. Vermeer Mfg. Co.*, 298 F.3d 1290, 1297 (Fed. Cir. 2002) (“Once an inventor realizes that the invention as later claimed indeed works for its intended purpose, further ‘experimentation’ may constitute a barring public use.”).

¹⁸⁵ 339 F.3d 1373, 1379–80 (Fed. Cir. 2003) (“This court sees no reason to modify the general rule for inherent anticipation in a case where inherency supplies the entire anticipatory subject matter.”).

¹⁸⁶ *Id.*

anticipates if earlier.”¹⁸⁷ Here, anyone practicing the prior art patent would inevitably infringe the patent at issue because the metabolite necessarily would be produced in the human body. As such, the court found inherent anticipation.

Importantly, in these latter situations where the invention is inevitably produced, the Federal Circuit has held that inherent anticipation is possible even if the PHOSITA would not have appreciated or recognized the disclosure at the time of the prior art reference.¹⁸⁸ For the first form of inherent anticipation—the rule of supplementation—the PHOSITA necessarily is aware of the missing limitations.¹⁸⁹ The rule simply allows consideration of information already known to the PHOSITA that is not memorialized in the prior art document. For inherent disclosure based on inevitable results, however, the law was unclear as to whether the PHOSITA needed to appreciate the necessary result. Some cases suggested that contemporaneous appreciation by the PHOSITA was required.¹⁹⁰ Other cases, however, stated inherent anticipation could arise *even if* the PHOSITA would not have appreciated the presence of the missing subject matter.¹⁹¹ *Schering*, however,

¹⁸⁷ *Id.* at 1379 (quoting *Bristol-Meyers Squibb Co. v. Ben Venue Labs., Inc.*, 246 F.3d 1368, 1378 (Fed. Cir. 2001)).

¹⁸⁸ *See, e.g., SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331, 1343 (Fed. Cir. 2005) (finding inherent anticipation even though the claimed chemical “was not even discovered until years after the [prior art] patent was filed”); *Schering*, 339 F.3d at 1377.

¹⁸⁹ *See supra* notes 176–77 and accompanying text.

¹⁹⁰ *Elan Pharms., Inc. v. Mayo Found. for Med. Educ. & Research*, 304 F.3d 1221, 1227–28 (Fed. Cir. 2002) (removing inherency discussion and replacing with enablement analysis: “The single reference must describe and enable the claimed invention, including all claim limitations, with sufficient clarity and detail to establish that the subject matter already existed in the prior art and that its existence was recognized by persons of ordinary skill in the field of the invention”), *vacated* 314 F.3d 1299 (Fed. Cir. 2002) (en banc), *and replaced by* 346 F.3d 1051, 1054 (Fed. Cir. 2003); *Crown Operations Int’l, Ltd. v. Solutia Inc.*, 289 F.3d 1367, 1375 (Fed. Cir. 2002) (“An anticipating reference must describe the patented subject matter with sufficient clarity and detail to establish that the subject matter existed in the prior art and that such existence would be recognized by persons of ordinary skill in the field of the invention.”); *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (“To establish inherency, the extrinsic evidence ‘must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.’” (quoting *Cont’l Can Co. USA, Inc. v. Monsanto*, 948 F.2d 1264, 1268 (Fed. Cir. 1991))); *Cont’l Can Co. USA, Inc.*, 948 F.2d at 1268 (“To serve as an anticipation when the reference is silent about the asserted inherent characteristic, such gap in the reference may be filled with recourse to extrinsic evidence. Such evidence must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.”).

¹⁹¹ *See, e.g., In re Cruciferous Sprout Litig.*, 301 F.3d 1343, 1351 (Fed. Cir. 2002) (“It is unnecessary for purposes of anticipation for the persons sprouting these particular cultivars to have realized that they were sprouting something rich in glucosinolates and high in Phase 2 enzyme-inducing potential.”); *MEHL/Biophile Int’l Corp. v. Milgraum*, 192 F.3d 1362, 1366 (Fed. Cir. 1999) (“Where, as here, the result is a necessary consequence of what was deliberately intended, it is of no import that the article’s authors did not appreciate the results.”); *Atlas Powder Co. v. Ireco, Inc.*, 190 F.3d 1342, 1348–49 (Fed. Cir. 1999) (“Because ‘sufficient

ended that debate, making clear that appreciation was not necessary.¹⁹² Later cases have followed *Schering*.¹⁹³

A possession-based approach to the prior art suggests the Federal Circuit's rule in *Schering* is wrong. For inherent anticipation, the PHOSITA must be able to appreciate the missing subject matter. It cannot be said that, based on the prior art patent, the public was in possession of the claimed invention if the PHOSITA was unaware of the missing subject matter.¹⁹⁴ Possession generally requires communication to third parties that someone (in this case, the public) is asserting dominion over a resource.¹⁹⁵ For inherent anticipation without contemporaneous appreciation of the missing element, such public notice does not occur. Reading the patent document itself would teach the public nothing about the invention. For example, in *Schering*, someone reading the prior art patent would not be aware of the particular metabolite produced by the body when the compound in that patent is ingested. Similarly, in *SmithKline Beecham Corp. v. Apotex Corp.*, the Federal Circuit found the claim inherently anticipated even though it acknowledged the claimed chemical was not discovered until after the prior art patent.¹⁹⁶ The requirement for

eration' was inherent in the prior art, it is irrelevant that the prior art did not recognize the key aspect of Dr. Clay's alleged invention—that air may act as the sole sensitizer of the explosive composition. An inherent structure, composition, or function is not necessarily known.”)

¹⁹² See *Schering*, 339 F.3d at 1377.

¹⁹³ See, e.g., *In re Omeprazole Patent Litig.*, 483 F.3d 1364, 1373 (Fed. Cir. 2007) (“The record shows formation of the in situ separating layer in the prior art even though that process was not recognized at the time. The new realization alone does not render that necessary prior art patentable.” (citing *Schering*, 339 F.3d at 1377)); *Abbott Labs. v. Baxter Pharm. Prods., Inc.*, 471 F.3d 1363, 1368 (Fed. Cir. 2006) (“[T]hat lack of knowledge is wholly irrelevant to the question of whether the ‘176 patent claims something “new” over the disclosure of the ‘211 patent; the claimed property of resistance to degradation is found inherently in the disclosure.”); *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1378 (Fed. Cir. 2005) (“Thus, when considering a prior art method, the anticipation doctrine examines the natural and inherent results in that method without regard to the full recognition of those benefits or characteristics within the art field at the time of the prior art disclosure.”).

¹⁹⁴ As Judge Lourie has noted,

Inherency is a very tricky concept in patent law. Its salutary goal is to prevent subject matter that is effectively in the public's possession from being retrieved by a patent and withdrawn from the public domain. On the other hand, its downside is withholding patent protection from that which the public knew nothing about until a later inventor found it. . . .

An unbounded concept of inherency, as *Schering* illustrates, threatens to stymie innovation by withdrawing from the realm of patentability that which has not before been known, used, or benefited from.

In re Montgomery, 677 F.3d 1375, 1383–84 (Fed. Cir. 2012) (Lourie, J., dissenting).

¹⁹⁵ See *Rose*, *supra* note 1, at 78–81.

¹⁹⁶ 403 F.3d 1331, 1343 (Fed. Cir. 2005).

communication to the general public is lacking in both of these contexts. One cannot say that the invention was in the grasp of the public if, by reading the document, the PHOSITA had no idea of the invention's existence.

This dynamic could be viewed differently if, instead of basing the anticipation decision on *written* prior art, the argument was instead based on an earlier *use* of the claimed invention. If the evidence was that doctors had prescribed the medication to patients, then necessarily the metabolite was produced. In this way, the doctrine acts more akin to non-informing public uses, such as the photocopier example. The public has reaped the benefit of the metabolite because patients converted the drug into the metabolite form (which is a precursor to the drug having any efficacy in the human body). Thus, the possession-based approach suggests a bifurcated approach to inherency, treating in-kind prior art differently than written prior art.

Lemley and Burk have offered a similar explanation for the inherency doctrine. They view inherency as being triggered when “the public already gets the *benefit* of the claimed element or invention.”¹⁹⁷ Under their approach, however, the failure of the PHOSITA to appreciate the invention or missing claim limitation from a written prior art reference would be irrelevant.

A possession-based account of novelty, however, suggests that this reconciliation of inherency precedent is only partially correct. How can one say that the public has received the benefit of the invention, such as the metabolite in *Schering*, based on a *written document*, if the public is not aware of the chemical? The court's analysis necessarily assumes that someone actually consumed the chemical disclosed in the prior art patent, producing the metabolite. But that assumption transforms the prior art from one based on a publication to one based on a use, a use which has not been proven. Both the Patent Act of 1952 and the AIA treat public uses as a distinct form of prior art, and the court's inherency doctrine (and the Burk–Lemley proposal) conflate them. A possession-based approach, by requiring some public act or communication, would suggest a bifurcated approach. Inherent disclosure through a written document is not possible unless the PHOSITA would appreciate the necessary presence of the claim limit or the invention. *Schering*, from this perspective, is wrongly decided. But public uses, where the invention is necessarily present, would be inherently disclosed because, just like the

¹⁹⁷ Burk & Lemley, *supra* note 183, at 374.

non-informing public use, nothing prevents the PHOSITA from investigating the use further and discovering the missing element.

Janice Mueller and Donald Chisum view inherency differently from Burk and Lemley. They argue that inherency is, in essence, a heightened enablement requirement.¹⁹⁸ Anticipation should only be inherent when “no more than *de minimis* experimentation should be required to achieve a later-claimed invention.”¹⁹⁹ As a result, the doctrine should be “narrowly and sparingly applied”²⁰⁰ because inherency is triggered only when a result is inevitable, making the need for experimentation minimal. Mueller and Chisum reject the Burk–Lemley approach because Burk and Lemley “do not make sufficiently clear what ‘public benefit’ means.”²⁰¹ They do agree, however, that contemporaneous recognition of the invention is not required.²⁰²

The focus on enablement in the Mueller–Chisum proposal dovetails nicely with the concepts of possession addressed in this Article. Because enablement is the lodestone for possession in patent law, in essence Mueller and Chisum are advocating for an approach related to demonstrating possession. Their approach, however, fails to reconcile the need for a public act under the possession theory, particularly for written documents.

Thus, the possession-based approach to inherency provides a third alternative that balances the advantages and disadvantages of the Burk–Lemley and Mueller–Chisum proposals. By limiting inherency to written documents only when there is contemporaneous appreciation of the undisclosed element, the doctrine will be more rarely applied, per Mueller and Chisum’s concerns. It also addresses their concern with the Burk–Lemley model of looking for the “public benefit,” since there is no public benefit from a silent, written disclosure. Allowing for inherent and unrecognized inherency only in the context of prior uses then ensures that something the public has come to rely upon is not artificially removed from the public domain, embracing the advantages suggested by Burk and Lemley. Moreover, if the work required to discover such an improvement is truly trivial, then the enablement-standard advanced by Mueller and Chisum should also be satisfied.

¹⁹⁸ See Janice M. Mueller & Donald S. Chisum, *Enabling Patent Law's Inherent Anticipation Doctrine*, 45 HOUS. L. REV. 1101, 1103 (2008).

¹⁹⁹ *Id.* at 1104.

²⁰⁰ *Id.* at 1103.

²⁰¹ *Id.*

²⁰² *Id.* at 1127.

3. *Because Enablement Evolves Over Time, the Enabling Disclosure Must Be Made Prior to the Invention or Critical Date*

Another consideration that flows from viewing anticipation as rooted in possession is the timing concern. Unlike property law, where possession is a physical occurrence, possession in the anticipation context—as moderated by the requirement for an enabling disclosure—depends on how the PHOSITA would read and understand the state of the art. Specifically, when assessing anticipation, “[s]uch possession [of the claimed invention] is effected if one of ordinary skill in the art could have combined the publication’s description of the invention with his own knowledge to make the claimed invention.”²⁰³ The courts, in another modest exception to the “single reference” rule for anticipation, have considered other pieces of prior art that demonstrate what the PHOSITA would have known.²⁰⁴

The knowledge of the PHOSITA is necessarily a moving target because, as technology advances, so will the background knowledge of those in the field. Thus, someone reading a patent from 1970 today would be able to extrapolate more readily from its teachings, given the knowledge we now have.²⁰⁵ In fact, a disclosure that was not enabling when it was first published may *become* enabling later as the state of the art evolves. *In re Donohue* is illustrative.²⁰⁶ The prior art reference in the case disclosed all of the limitations of the claim at issue.²⁰⁷ The issue instead involved whether the reference enabled the claimed invention.²⁰⁸ To demonstrate the knowledge of the PHOSITA, the USPTO and Federal Circuit both relied on other references, including a patent that was filed three years after the prior art reference at issue and that issued five years after

²⁰³ *In re Donohue*, 766 F.2d 531, 533 (Fed. Cir. 1985); *see also In re Samour*, 571 F.2d 559, 562 (C.C.P.A. 1978) (“However, the disclosure in [the arguably anticipatory art] must be considered together with the knowledge of one of ordinary skill in the pertinent art.”).

²⁰⁴ *In re Baxter Travenol Labs.*, 952 F.2d 388, 390 (Fed. Cir. 1991) (“[E]xtrinsic evidence may be considered when it is used to explain, but not expand, the meaning of a reference.”); *In re Donohue*, 766 F.2d at 534 (“The purpose of citing Lincoln and Wagner is, instead, to show that the claimed subject matter, as disclosed in Nomura, was in the public’s possession. Therefore, the anticipation rejection based on Nomura, Lincoln, and Wagner is proper.” (citation omitted)); *In re Samour*, 571 F.2d at 562 (“[A]dditional references . . . are relied on solely as evidence that, more than one year prior to appellant’s filing date, a method of preparing the claimed subject matter . . . would have been known by, or would have been obvious to, one of ordinary skill in the art.”).

²⁰⁵ *Cf. Holbrook*, *supra* note 16, at 40–45 (arguing for enablement-based approach to doctrine of equivalents that ensnares later knowledge of the PHOSITA).

²⁰⁶ 766 F.2d 531.

²⁰⁷ *Id.* at 534 (“Nomura alone discloses every element claimed.”).

²⁰⁸ *Id.* at 532.

that reference.²⁰⁹ Reliance on the later reference to demonstrate that an earlier reference is enabled would be inappropriate if the knowledge of the PHOSITA were not expanding over time. The combination of the earlier disclosure of all of the claim elements with a subsequent demonstration of enablement confirms that the knowledge of the PHOSITA expands over time, which is reflected in the case law.²¹⁰

As such, timing for the assessment of knowledge becomes crucial. The “snapshot” in time for assessing anticipation should be, under the 1952 Act, the date of invention or the critical date, and under the AIA, the filing date or the critical date.²¹¹ Importantly, it would be incorrect to assess whether the disclosure is enabling as of the publication date of the relevant reference. The background knowledge of the PHOSITA should be allowed to grow, likely putting more within the possession of the PHOSITA and, thus, the public.²¹² Thus, the teaching of a given prior art reference should expand over time, ensnaring more knowledge and making subsequent inventions in that field more difficult to obtain.

A litigant of course would need to prove that the reference is now enabled. But, in theory, a disclosure that at one time was not enabling could actually become enabling as the state of the art evolved. Thus, possession in the anticipation context is not a static concept.²¹³

III. OBVIOUSNESS AS CONSTRUCTIVE POSSESSION

The possession-based approach to novelty affords three important insights into the doctrine: that the “as arranged in the claim” requirement is unnecessary, that the inherency doctrine is incorrect, and that a prior art

²⁰⁹ *Id.* at 532 nn.3–4 (Primary reference, Nomura, dated 1970 and reference in support of enablement, U.S. Patent No. 3,876,691, issued April 8, 1975, on application filed April 16, 1973).

²¹⁰ To be clear, there was a second reference used to support enablement that pre-dated the anticipatory reference. *See id.* at 532 n.5. The court, however, drew no distinctions between the earlier and later references, confirming that either would be sufficient to demonstrate that the anticipatory reference was enabled.

²¹¹ *See supra* notes 17–22 and accompanying text.

²¹² *In re Donohue*, 766 F.2d at 533–34; *In re Samour*, 571 F.2d 559, 562 (C.C.P.A. 1978) (noting appropriate timing of novelty is whether “more than one year prior to appellant’s filing date, [the prior art] placed [the claimed invention] ‘in possession of the public.’”). *See generally* Donald S. Chisum, *Comment: Anticipation, Enablement and Obviousness: An Eternal Golden Braid*, 15 AIPLA Q.J. 57, 58 (1987) (discussing the complex relation between anticipation, enablement, and obviousness).

²¹³ The dynamic nature also creates issues of timing for such proof. For a lengthier exploration of the relationship between patent disclosures and time, see Timothy R. Holbrook, *Patent Disclosures and Time*, 69 VAND. L. REV. (forthcoming 2016).

reference's teaching can grow over time. Novelty, however, is not the only gatekeeper for preventing patents that are deemed unworthy in light of the prior art. Patent law also requires an invention be non-obvious.

The non-obviousness requirement precludes a patent if the invention is a trivial improvement over the state of the art.²¹⁴ Patent law, therefore, is meant to incentivize jumps in the state of the art and not reward incremental, inevitable innovation.²¹⁵

Because novelty and non-obviousness both relate to the prior art, unsurprisingly courts have linked the two. Courts have noted that prior art that anticipates a claimed invention also renders it obvious, and that a reference that does not anticipate the invention may nevertheless render it obvious.²¹⁶ Unlike anticipation, however, the non-obviousness requirement will preclude patentability even if the invention has not been made or disclosed in its entirety.²¹⁷ Obviousness acts more as a form of constructive possession, where the law treats the invention as being within the possession of the public even though the invention has not been actually made or disclosed in its entirety. It is also unsurprising that courts have linked obviousness and possession as well, particularly through the idea of enablement, i.e., that the prior art teaches how to make the claimed invention. In the obviousness context, however, it would be the prior art in the aggregate, and not a single reference, that would have to enable the claimed invention.²¹⁸

²¹⁴ *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 14 (1966) (“An invention which has been made, and which is new in the sense that the same thing has not been made before, may still not be patentable if the difference between the new thing and what was known before is not considered sufficiently great to warrant a patent.” (quoting S. Rep. No. 82-1979, at 6 (1952); H.R. Rep. No. 82-1923, at 7 (1952))).

²¹⁵ *See Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 267 (1851) (“[U]nless more ingenuity and skill [is] . . . possessed by an ordinary mechanic acquainted with the business, there was an absence of that degree of skill and ingenuity which constitute essential elements of every invention.”).

²¹⁶ *See, e.g., Popeil Bros., Inc. v. Schick Elec., Inc.*, 494 F.2d 162, 164–65, 167 (7th Cir. 1974) (“Thus prior art which is insufficiently similar to anticipate a purported invention may still render it obvious. Where, however, a purported invention is anticipated by prior art, it cannot be disputed that it must also be obvious. Though the converse would not necessarily be true, that which refutes novelty equally refutes invention.” (citations omitted)).

²¹⁷ KIMBERLY A. MOORE, TIMOTHY R. HOLBROOK & JOHN F. MURPHY, *PATENT LITIGATION AND STRATEGY* 698 (4th ed. 2013).

²¹⁸ *See Holbrook, supra* note 112, at 985 (“A § 103 analysis does not require that an individual piece of prior art be enabling. Indeed, one reference cannot be enabling of the claimed invention because, in the realm of obviousness, part of the claimed invention is not disclosed in the single reference.”).

At a minimum, there is an intuitive linkage among anticipation, obviousness, and possession via enablement.²¹⁹ Relating back to the property-based possession requirements, public notice and utilization are present in the context of obviousness as well. Obviousness must be assessed with respect to publicly accessible information from the same field of technology or one reasonably related to the problem the inventor is attempting to solve.²²⁰ The prior art used, therefore, must be something the relevant audience would consider in assessing obviousness, satisfying the public notice aspects of property law's possession doctrines. The utilization requirement posed by *Rose* would be tougher to explain because, by definition, the invention has not been completed in its entirety. Nevertheless, just as property law provides constructive possession absent utilization, obviousness operates as constructive possession, precluding patentability when the public is effectively in possession of the invention because it is merely a trivial improvement. The potential is there for the public to utilize the invention.

Courts previously linked possession and obviousness, though such rhetoric has disappeared from modern jurisprudence. The Supreme Court has related obviousness to possession-like ideas. In the seminal case *Graham v. John Deere Co. of Kansas City*, the Court gestures towards non-obviousness as a constitutional requirement by noting Congress lacked authority to “enlarge the patent monopoly without regard to the innovation, advancement or social benefit gained thereby” and to “authorize the issuance of patents whose effects are to remove existent knowledge from the public domain, or to restrict free access to materials already available.”²²¹ To be “existent knowledge,” the invention must have been, in the aggregate, part of the storehouse of knowledge, even though it had not been created or disclosed in a singular form.

While the Supreme Court did not expressly use the term “possession” in discussing obviousness, other cases did expressly make the link.²²² In

²¹⁹ See *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 297 (Fed. Cir. 1985) (“The test of whether a particular compound described in the prior art may have been relied upon to show that the claimed subject matter at issue would have been obvious is whether the prior art provided an enabling disclosure with respect to the disclosed prior art compound.”).

²²⁰ See *In re Clay*, 966 F.2d 656, 658–59 (Fed. Cir. 1992).

²²¹ 383 U.S. 1, 6 (1966).

²²² See, e.g., *In re Payne*, 606 F.2d 303, 314–15 (C.C.P.A. 1979) (“References relied upon to support a rejection under 35 USC [§] 103 must provide an enabling disclosure, *i.e.*, they must place the claimed invention in the possession of the public. An invention is not ‘possessed’ absent some known or obvious way to make it.” (citations omitted)); *In re Samour*, 571 F.2d 559, 562 (C.C.P.A. 1978) (“Whether claimed subject matter was in possession of the public depends on whether a method of preparing the claimed subject matter would have been known by, or would have been obvious to, one of ordinary skill in the pertinent art.”);

discussing obviousness as possession, the CCPA specifically linked possession, anticipation, and obviousness. Explaining its law of anticipation in the context of chemicals, the CCPA noted that “the ‘true test of any prior art relied on to show or suggest that a chemical compound is old, is whether the prior art is such as to place the disclosed “compound” in the *possession of the public.*”²²³ The court then linked obviousness to anticipation by noting that “[w]hile [an earlier case] was bottomed on an issue arising under 35 U.S.C. § 102 . . . that test, in our view, is also properly applicable to issues arising under 35 U.S.C. § 103.”²²⁴ As such, “it is our view that if the prior art of record fails to disclose or render obvious a method for making a claimed compound, at the time the invention was made, it may not be legally concluded that the compound itself is in the possession of the public.”²²⁵

Hoeksema dealt with a particular scenario: where the assertion of obviousness was based on similar prior art chemical compounds, but the prior art did not teach how to make the claimed compounds.²²⁶ Nevertheless, the court related anticipation and obviousness to possession through the requirement that the prior art enable the claimed invention.

More recently, and inexplicably, courts began to step back from linking obviousness and possession. In particular, the courts have taken to rejecting the link between enablement and obviousness, though they have made this move without explanation.²²⁷ The possession language has fallen out of the Federal Circuit’s lexicon. Such loss is unfortunate because, as this Part explores, the obviousness requirement is best viewed as a form of constructive possession.

In re Hoeksema, 399 F.2d 269, 274 (C.C.P.A. 1968) (“[I]f the prior art of record fails to disclose or render obvious a method for making a claimed compound, at the time the invention was made, it may not be legally concluded that the compound itself is in the possession of the public.”).

²²³ *In re Hoeksema*, 399 F.2d at 274 (emphasis added) (quoting *In re Brown*, 329 F.2d 1006, 1011 (C.C.P.A. 1964)).

²²⁴ *Id.*

²²⁵ *Id.*

²²⁶ *Id.* at 271.

²²⁷ *See, e.g.*, *Minn. Mining & Mfg. Co. v. Blume*, 684 F.2d 1166, 1173 n.10 (6th Cir. 1982) (“Thus there is no requirement that the prior art must make an enabling disclosure before it may be considered in determining obviousness, rather, the requirement is simply that the means which would enable the inventor to arrive at the product be obvious.”); *Mooney v. Brunswick Corp.*, 663 F.2d 724, 734 (7th Cir. 1981) (“The enabling disclosure requirement has been only uncertainly and relatively recently imported into the analysis of obviousness claims, not as a matter of statutory construction but rather by way of analogy to the anticipation defense of 35 U.S.C. § 102. We therefore decline to give this requirement the overly rigorous interpretation urged by plaintiff” (citation omitted)).

A. *Obviousness and the “Obvious to Try” Doctrine as Enablement/Possession*

Using a possession-based lens to consider the obviousness doctrine, it becomes clear that it is a form of constructive possession. In the property context, we use the fiction of constructive possession to effect some broader policy interest.²²⁸ For example, we treat wild animals on private property as being the property owner’s, even though the owner is not in *actual* possession of the animal. When the animal leaves the land, it is no longer deemed the property owner’s property. We create this form of constructive possession to discourage trespass: if the animal were still truly “unowned,” then hunters or others would have an incentive to kill the animal while on the property owner’s land.

Thus, constructive possession doctrines arise when, although someone is not in actual possession of the item, we treat them as if they are in possession for a variety of policy reasons.²²⁹ Even constructive possession, however, generally requires some sort of communication to third parties. In *Pierson v. Post*, for example, either trapping or mortal wounding while in hot pursuit is sufficient for ownership, even though the hunter at that point in time is not *yet* in actual possession of the animal.²³⁰ Yet third parties who encounter those animals know that someone owns the animal,²³¹ even though they may not know who that owner is.

Obviousness operates in a similar way. By definition, the invention has not actually been created or disclosed.²³² Nevertheless, obvious inventions are not worthy of patent protection because they are merely trivial, if not inevitable, advances in the state of the art. As such, they are deemed to be within the possession of the PHOSITA.

The Supreme Court’s decision in *Graham* highlights this link. There, the Supreme Court articulated the still-influential four-factor test for assessing obviousness. First, the court must determine the scope and content of the prior art.²³³ Second, the court must determine the differences between the prior art

²²⁸ See Holbrook, *supra* note 16, at 3–7 (discussing constructive possession doctrines and viewing doctrine of equivalents as such a doctrine).

²²⁹ *Id.* at 3.

²³⁰ *Id.* at 2–3.

²³¹ Unless you are Kramer on *Seinfeld* and come across caged lobsters. See *The Hamptons* (Seinfeld), WIKIPEDIA, http://en.wikipedia.org/wiki/The_Hamptons_%28Seinfeld%29 (last visited Feb. 19, 2016).

²³² *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 14 (1966).

²³³ *Id.* at 17.

and the claimed invention.²³⁴ Third, the court must consider the level of ordinary skill in the art.²³⁵ Finally, a court should consider secondary indicia of non-obviousness, such as the commercial success of the invention, whether the invention satisfies a long-felt but unsolved need, and the failure of others.²³⁶

The secondary considerations themselves demonstrate a real world, possession-like aspect to them. These non-technical forms of evidence serve to demonstrate whether others have or should have already reached the technical solution disclosed in the patent. Commercial success, for example, suggests that, if the invention was commercially successful, other inventors would have been highly motivated to create the innovation, and the patentee, who was the first to get there, is ultimately deserving of the patent.²³⁷ Similarly, the failure of others shows that the invention was not yet in the possession of other similarly skilled inventors, confirming that the patentee indeed accomplished something of significance. Copying also creates an inference that others were not in possession of the invention because they had to rely on the patentee to create the device.

Of course, development of the non-obviousness standard has fallen on the shoulders of the Federal Circuit since its creation in 1982. Under Federal Circuit doctrine that emerged in the late 1990s and early 2000s, the link between obviousness and possession (through enablement) became apparent. Because the invention has not been disclosed in a single reference, the obviousness analysis typically requires the fact finder to look at multiple prior art references to determine whether the claimed invention differs significantly from the state of the art. Because no single reference discloses the entirety of the invention, by definition, no single prior art reference can be enabling of the claimed invention.²³⁸

²³⁴ *Id.*

²³⁵ *Id.*

²³⁶ *Id.* at 17–18. There are other secondary indicia of obviousness as well, including licenses showing industry respect for the invention; copying of the invention by infringers; unexpected results; and skepticism by others in the field that the invention would work. *See, e.g.,* *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349–54 (Fed. Cir. 2012) (discussing copying, licensing, and industry skepticism); *see also* MOORE ET AL., *supra* note 217, at 717 (cataloging various secondary considerations).

²³⁷ *See* Edmund W. Kitch, *Graham v. John Deere Co.: New Standards for Patents*, 1966 SUP. CT. REV. 293, 332 (explaining the generally weak inferences required for commercial success to be probative of non-obviousness).

²³⁸ *See* Holbrook, *supra* note 112, at 984–91 (arguing that obviousness-type on-sale bar should not require invention to be ready for patenting because enablement is not required in the obviousness context).

Nevertheless, often all of the components of the invention may already be known in the prior art, though in different references. For example, for “Post-it” notes, both paper and the adhesive on the back were already known. It was the combination of these two features that resulted in the invention.²³⁹

In this context, prior Federal Circuit law required that there be some teaching, motivation, or suggestion to combine those prior art references to yield the claimed invention.²⁴⁰ Only in those contexts would the invention be deemed obvious; the absence of some sort of teaching meant that the claim would be non-obvious, notwithstanding the presence of all of the limitations of the claim in the prior art.²⁴¹ This test came to be called the “TSM” test. The court developed this test to avoid possible hindsight bias: once a patent has issued, a fact finder might be able to use the patent itself as the “roadmap” to search through the prior art to find all of the requirements of the invention, even though, at the time of the invention, no such guidance existed.²⁴²

In prior work, I argued that the TSM test operated in a manner akin to enablement. In particular, I argued that the TSM test acted in a manner akin to the doctrine of “incorporation by reference.”²⁴³ In the anticipation context, of course, we generally look to one prior art reference in assessing the novelty of the invention.²⁴⁴ A reference, though, can incorporate by reference a second document, and the law will treat both documents as a single document for anticipation purposes.²⁴⁵ This combination then also allows both documents to be considered for the purposes of assessing whether the prior art enables the

²³⁹ See U.S. Patent No. 5,194,299 (filed Dec. 31, 1986) (patent covering “Post-it” notes).

²⁴⁰ See, e.g., *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999); *In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998).

²⁴¹ See *Carella v. Starlight Archery & Pro Line Co.*, 804 F.2d 135, 140 (Fed. Cir. 1986); see also *Teleflex, Inc. v. KSR Int’l Co.*, 119 Fed. App’x 282, 286–90 (Fed. Cir. 2005) (reversing summary judgment of invalidity based on misapplication of TSM analysis), *rev’d*, *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398 (2007).

²⁴² See Timothy R. Holbrook, *Patents, Presumptions, and Public Notice*, 86 IND. L.J. 779, 809–10 (2011). See generally Gregory N. Mandel, *Another Missed Opportunity: The Supreme Court’s Failure to Define Nonobviousness or Combat Hindsight Bias in KSR v. Teleflex*, 12 LEWIS & CLARK L. REV. 323, 336–42 (2008) (discussing experimental studies and flaws in the current obviousness inquiry); Gregory N. Mandel, *Patently Non-Obvious: Empirical Demonstration that the Hindsight Bias Renders Patent Decisions Irrational*, 67 OHIO ST. L.J. 1391, 1393 (2006) (performing experimental studies that show the presence of the hindsight bias in assessing the obviousness of an invention).

²⁴³ Holbrook, *supra* note 10, at 171–72.

²⁴⁴ *Id.* at 169. There are of course supplementary exceptions to this rule, as discussed in this Article, such as proof of inherency and the knowledge of the PHOSITA. See *supra* notes 174–213 and accompanying text.

²⁴⁵ See, e.g., *Advanced Display Sys., Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000). Incorporation by reference “makes clear that the material is effectively part of the host document as if it were explicitly contained therein.” *Id.*

claimed invention. In my view, the TSM test was doing the same work in the obviousness context. Effectively, the court was looking for a reason to link all of the documents together and then to ask whether, in the aggregate, the documents enabled the claimed invention.²⁴⁶

Because enablement is the appropriate analog to possession, there is a gap between obviousness and actual possession. A single prior art reference cannot enable the claimed invention because not all of the limitations of the prior art are found in that single reference. But instead, we could link obviousness, and the potential for an enabling disclosure, to the entirety of the prior art. By requiring the TSM, the court was mandating some path to link the teachings of the prior art. In the aggregate, in essence, the court was asking whether the public was effectively in possession of the claimed invention.

In *KSR International Co. v. Teleflex Inc.*, however, the Supreme Court rejected the Federal Circuit's rigid application of the TSM test.²⁴⁷ Instead, it offered a more flexible rule that takes into account the knowledge and creativity of the PHOSITA.²⁴⁸ In so doing, it resuscitated the "obvious to try" doctrine,²⁴⁹ which the Federal Circuit had rejected.²⁵⁰ The Supreme Court reasoned,

²⁴⁶ Holbrook, *supra* note 10, at 171.

²⁴⁷ 550 U.S. 398, 419 (2007).

²⁴⁸ *KSR Int'l Co.*, 550 U.S. at 420–21 (noting PHOSITA is not an automaton but instead a person of ordinary creativity).

²⁴⁹ *KSR Int'l Co.*, 550 U.S. at 421 ("The same constricted analysis led the Court of Appeals to conclude, in error, that a patent claim cannot be proved obvious merely by showing that the combination of elements was '[o]bvious to try.' When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103." (citation omitted)); accord *In re Kubin*, 561 F.3d 1351, 1358 (Fed. Cir. 2009) ("Insofar as *Deuel* implies the obviousness inquiry cannot consider that the combination of the claim's constituent elements was 'obvious to try,' the Supreme Court in *KSR* unambiguously discredited that holding.").

²⁵⁰ See, e.g., *Pfizer, Inc. v. Apotex, Inc.*, 488 F.3d 1377, 1379 (Fed. Cir. 2007) (Newman, J., dissenting from denial of en banc review) ("The panel's application of the obvious-to-try standard is in direct conflict with precedent; it has long been the law that 'patentability shall not be negated by the manner in which the invention is made.'" (quoting 35 U.S.C. § 103 (2006))); *In re Deuel*, 51 F.3d 1552, 1569 (Fed. Cir. 1995) ("'Obvious to try' has long been held not to constitute obviousness."). The Federal Circuit in *In re O'Farrell* elaborated on why "obvious to try" was not the standard:

It is true that this court and its predecessors have repeatedly emphasized that "obvious to try" is not the standard under § 103. However, the meaning of this maxim is sometimes lost. Any invention that would in fact have been obvious under § 103 would also have been, in a sense,

When there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp. If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense. In that instance the fact that a combination was obvious to try might show that it was obvious under § 103.²⁵¹

Under the obvious-to-try methodology, an invention is obvious if there are only a few possible variations of the invention possible such that the PHOSITA could try them all with a reasonable expectation of success.²⁵²

While *KSR* moved the law of obviousness away from the TSM test, the obvious-to-try standard actually broadens the inquiry. In so doing, the test for obviousness has grown even closer to enablement, patent law's proxy for possession. In order to be enabled, either a patent document or piece of prior art must allow the PHOSITA to make the invention *without undue experimentation*.²⁵³ The obvious-to-try test is similar. It effectively asks whether, based on the state of the art, the PHOISTA would have a reasonable expectation of success when trying different, predictable variations of the invention.

Post-*KSR* cases applying the obvious-to-try rubric have mirrored the language of enablement and undue experimentation. For example, in *In re Kubin*, the Federal Circuit encountered a “claim to a classic biotechnology invention—the isolation and sequencing of a human gene that encodes a

obvious to try. The question is: when is an invention that was obvious to try nevertheless non-obvious?

The admonition that “obvious to try” is not the standard under § 103 has been directed mainly at two kinds of error. In some cases, what would have been “obvious to try” would have been to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful. In others, what was “obvious to try” was to explore a new technology or general approach that seemed to be a promising field of experimentation, where the prior art gave only general guidance as to the particular form of the claimed invention or how to achieve it.

In re O'Farrell, 853 F.2d 894, 903 (Fed. Cir. 1988) (citations omitted). The Federal Circuit has suggested that *KSR* actually resurrected this more nuanced approach to the “obvious to try” doctrine. *See In re Kubin*, 561 F.3d at 1359–60 (“The Supreme Court’s admonition against a formalistic approach to obviousness in this context actually resurrects this court’s own wisdom in *In re O'Farrell*, which predates the *Deuel* decision by some seven years.”).

²⁵¹ *KSR Int'l Co.*, 550 U.S. at 421.

²⁵² *See In re Kubin*, 561 F.3d at 1360.

²⁵³ *In re Wands*, 858 F.2d 731, 737 (Fed. Cir. 1988).

particular domain of a protein,” a protein called the “Natural Killer Cell Activation Inducing Ligand (‘NAIL’).”²⁵⁴ The court found the claimed invention obvious because “the prior art teaches a protein of interest, a motivation to isolate the gene coding for that protein, and illustrative instructions to use a monoclonal antibody specific to the protein for cloning this gene” such that the PHOSITA would have had a reasonable expectation of success in creating the claimed invention.²⁵⁵ Making the tie to enablement even closer, the Federal Circuit expressly “decline[d] to cabin *KSR* to the ‘predictable arts’ (as opposed to the ‘unpredictable art’ of biotechnology).”²⁵⁶ The predictability of a particular art is a key factor in the enablement analysis.²⁵⁷ The obvious-to-try doctrine clearly contemplates the PHOSITA extrapolating from the teachings of the prior art to yield the claimed invention, just as an assessment of an enabling disclosure assesses whether the PHOSITA would be able to make an invention without undue experimentation.

The Federal Circuit further elaborated on the obvious-to-try standard in *Bayer Schering Pharma AG v. Barr Laboratories, Inc.*²⁵⁸ The court offered two points of clarification. The first was that “an invention would not have been obvious to try when the inventor would have had to try all possibilities in a field unreduced by direction of the prior art.”²⁵⁹ This harkens to the undue experimentation aspect enablement, given that the PHOSITA would have to explore all possible avenues to reach the claimed invention. Second, the court noted that “an invention is not obvious to try where vague prior art does not guide an inventor toward a particular solution.”²⁶⁰ This clarification is also similar to enablement, in that the cumulative disclosure of the prior art must be fairly particular to permit the creation of the invention.

Similarly, in *Unigene Laboratories, Inc. v. Apotex, Inc.*, the court explained that the prior art cannot be “vague” and that “[w]hen a field is ‘unreduced by direction of the prior art,’ and when prior art gives ‘no indication of which parameters were critical or no direction as to which of many possible choices is

²⁵⁴ *In re Kubin*, 561 F.3d at 1352.

²⁵⁵ *Id.* at 1360.

²⁵⁶ *Id.*

²⁵⁷ See *In re Wands*, 858 F.2d at 737 (noting “predictability or unpredictability of the art” as one factor in enablement); see also Sean B. Seymore, *Heightened Enablement in the Unpredictable Arts*, 56 UCLA L. REV. 127, 136–39 (2008) (discussing predictable and unpredictable arts).

²⁵⁸ 575 F.3d 1341 (Fed. Cir. 2009).

²⁵⁹ *Id.* at 1347.

²⁶⁰ *Id.*

likely to be successful,’ an invention is not obvious to try.”²⁶¹ Enablement similarly requires such direction to teach the PHOSITA how to make the claimed invention.

The Federal Circuit’s analysis in cases finding claims non-obvious under the “obvious to try” test supports the link between enablement and obviousness. In *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litigation*, the court confronted the argument of whether “it would have been obvious to try to develop [an] extended-release” version of the relevant chemical that would be bioequivalent.²⁶² The court rejected that argument because the absence of relevant evidence “suggests that skilled artisans would not have encountered finite, small, or easily traversed options in developing a therapeutically effective, extended-release formulation.”²⁶³

Finally, in *Takeda Chemical Industries, Ltd. v. Alphapharm Pty., Ltd.*, the court rejected an obvious-to-try argument with reasoning that sounds strikingly similar to an enablement inquiry.²⁶⁴ Specifically the court reasoned,

Rather than identify predictable solutions for antidiabetic treatment, the prior art disclosed a broad selection of compounds any one of which could have been selected as a lead compound for further investigation. Significantly, the closest prior art compound (compound b, the 6–methyl) exhibited negative properties that would have directed one of ordinary skill in the art away from that compound. Thus, this case fails to present the type of situation contemplated by the Court when it stated that an invention may be deemed obvious if it was “obvious to try.” The evidence showed that it was not obvious to try.²⁶⁵

An enablement inquiry would also require far more direction and specificity in order to show that the prior art would allow the PHOSITA to make the claimed invention without undue experimentation.

Of course, there are some important differences between the obvious-to-try inquiry and enablement, which trace the role of enablement in the anticipation context. In particular, enablement, as a disclosure obligation for patent applications, requires that the applicant disclose to the PHOSITA how to make

²⁶¹ 655 F.3d 1352, 1361 (Fed. Cir. 2011) (quoting *Bayer Schering Pharma AG*, 575 F.3d at 1347).

²⁶² 676 F.3d 1063, 1072 (Fed. Cir. 2012).

²⁶³ *Id.* at 1073.

²⁶⁴ 492 F.3d 1350 (Fed. Cir. 2007).

²⁶⁵ *Id.* at 1359.

and use the *full scope* of the claimed invention. Broad, generic claims may cover a large number of various embodiments of the invention, and the patent disclosure must enable virtually all of them. In contrast, obviousness, like anticipation, only requires that one particular embodiment of the invention be obvious to try (i.e., enabled by the prior art). The prior art, therefore, need only possess *one* embodiment of the invention to render the claim obvious.

Nevertheless, the courts' focus on predictability and ease of development, based on the aggregate of the teachings of the prior art, demonstrates that, like the old cases suggested, obviousness is truly about determining whether the prior art has placed the invention in the possession of the public by providing an enabling disclosure.

B. The Inconsistent Treatment of Obviousness as Possession in Current Law

The possession-based view of obviousness serves to inform other areas of patent law in which the concept of obviousness arises. Indeed, similar to the pervasiveness of enablement in various doctrines, obviousness too plays a variety of roles in patent law. In these other contexts, however, the courts have not treated obviousness consistently as demonstrating possession of the invention. This section explores the inconsistent ways that current law treats obviousness as a form of possession.

1. Examples of Obviousness Showing Possession of an Invention

In a variety of circumstances, patent law draws on obviousness under § 103 to inform other areas of the law. At times, the law views obvious variants of a disclosure or invention as demonstrating that the relevant party should be treated as having been in possession of the claimed invention.

Prior art preclusion of equivalents. Patents provide protection to patent holders beyond the literal scope of the claims. They also cover equivalents to the elements delineated in the claims through the doctrine of equivalents.²⁶⁶ An accused device infringes a patent under the doctrine of equivalents when, generally, the component in the device performs substantially the same

²⁶⁶ Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 732 (2002) (“The scope of a patent is not limited to its literal terms but instead embraces all equivalents to the claims described.”).

function in substantially the same way to yield substantially the same result as the limitation in the claim.²⁶⁷

By rendering the patent's boundaries a bit fuzzy, the doctrine of equivalents can create some uncertainty as to the patent's scope.²⁶⁸ As such, there are a variety of legal limitations on the doctrine.²⁶⁹ One is the doctrine of prior art preclusion.²⁷⁰ Under this doctrine, the patent holder cannot use the doctrine of equivalents to cover something that is already in the prior art.²⁷¹ In making this assessment, the Federal Circuit has adopted a loose framework involving the drafting of a "hypothetical" claim that would "*literally* cover" the accused device.²⁷² If the hypothetical claim is invalid as anticipated or obvious, then the patent owner cannot use the doctrine of equivalents to cover the accused device because the hypothetical claim's invalidity shows that the device was in the prior art.²⁷³ Thus, obvious variants are viewed as being within the prior art and thus are within the possession of the public.

Demonstration of an obvious variant of conception sufficient to antedate a reference. Under the Patent Act of 1952, the patent is awarded to the first person to invent. The presumptive invention date for any application, though, is the filing date. Applicants are not required to disclose what they believe is their invention date.²⁷⁴ Typically, the examiner at the patent office will then cite a prior art reference that predates the application date, and the applicant can then try to antedate the reference by showing that she invented prior to the reference's publication date.²⁷⁵

²⁶⁷ *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 608 (1950); *Dawn Equip. Co. v. Ky. Farms Inc.*, 140 F.3d 1009, 1016 (Fed. Cir. 1998).

²⁶⁸ *See Festo Corp.*, 535 U.S. at 732 ("It is true that the doctrine of equivalents renders the scope of patents less certain. It may be difficult to determine what is, or is not, an equivalent to a particular element of an invention.")

²⁶⁹ *See Holbrook*, *supra* note 16, at 21–29 (surveying legal limitations on the doctrine of equivalents).

²⁷⁰ *Wilson Sporting Goods Co. v. David Geoffrey & Assocs.*, 904 F.2d 677, 683 (Fed. Cir. 1990), *disapproved of on other grounds by* *Cardinal Chem. Co. v. Morton Int'l, Inc.*, 508 U.S. 83 (1993).

²⁷¹ *Id.* at 684.

²⁷² *Id.*

²⁷³ *Id.*

²⁷⁴ Toshiko Takenaka, *Rethinking the United States First-to-Invent Principle from a Comparative Law Perspective: A Proposal to Restructure § 102 Novelty and Priority Provisions*, 39 Hous. L. Rev. 621, 646–47 (2002) ("To avoid the necessity of showing an invention date for every application, the USPTO examines the novelty of a vast majority of applications under § 102(a) and (e) as of the application date, because the filing date of a U.S. patent application with an adequate disclosure of the invention is presumed to be the invention date. Only if an examiner finds a reference published earlier than the filing date is an inventor given a chance to eliminate the prior art reference by showing an earlier invention. . . ." (footnotes omitted)).

²⁷⁵ *Id.*

At times, the applicant may have difficulty showing the entirety of what she previously invented. There may be some discrepancies or other variations between the patent application and what she can prove she created earlier. The CCPA extended a helping hand to such applicants. In *In re Stryker*, the CCPA held that if the inventor can demonstrate that she invented something that would render the claim obvious, then the applicant could antedate the reference.²⁷⁶ In this context, obviousness is used to demonstrate that the inventor was sufficiently in possession of the invention to justify antedating the reference. Effectively, she has demonstrated that she did create the invention prior to the date of the reference, although it is an obvious variant. Obviousness in this context, thus, is sufficient to show possession.

Obviousness-type double patenting. The courts also have used obviousness to show possession in a different context. Patents are supposed to cover a single invention—one invention per patent.²⁷⁷ At times, however, an inventor may file multiple patent applications on what ultimately is the same invention. Prior to June 1995, patents lasted seventeen years from the date that the patent issued.²⁷⁸ As such, if an inventor obtained multiple patents on the same invention, then those patents could expire at different times because the patents would not issue simultaneously. Patents now expire twenty years after the earliest effective filing date, mitigating the potential gamesmanship.²⁷⁹ These scenarios often arose where a family of patents issued from a single, original application; now, all of those patents will generally expire at the same time.²⁸⁰ Nevertheless, the issue of such multiple patents on the same invention persists under the twenty-year term.²⁸¹

To combat the potential abuse of the patent system that such multiple patents could create, the courts and USPTO have applied the doctrine of double patenting.²⁸² The doctrine requires all of the patents covering the same

²⁷⁶ 435 F.2d 1340, 1341–42 (C.C.P.A. 1971); see also *In re Spiller*, 500 F.2d 1170, 1176 (C.C.P.A. 1974).

²⁷⁷ 37 C.F.R. § 1.141 (2014); see also 35 U.S.C. § 121 (2011) (“If two or more independent and distinct inventions are claimed in one application, the Director may require the application to be restricted to one of the inventions.”).

²⁷⁸ See *Gilead Scis., Inc. v. Lee*, 778 F.3d 1341, 1343 (Fed. Cir. 2015).

²⁷⁹ *Id.* at 1343–44.

²⁸⁰ See *In re Fallaux*, 564 F.3d 1313, 1318 (Fed. Cir. 2009).

²⁸¹ See *Abbvie Inc. v. Mathilda & Terence Kennedy Inst. of Rheumatology Trust*, 764 F.3d 1366, 1373 (Fed. Cir. 2014); see, e.g., *Gilead Scis., Inc. v. Natco Pharma Ltd.*, 753 F.3d 1208, 1217 (Fed. Cir. 2014). *Abbvie* provides a helpful, historical treatment of the doctrine. See *Abbvie*, 764 F.3d at 1372–74.

²⁸² See *Geneva Pharms., Inc. v. GlaxoSmithKline PLC*, 349 F.3d 1373, 1378 (Fed. Cir. 2003) (“This doctrine prevents an applicant from extending patent protection for an invention beyond the statutory term by claiming a slight variant.”).

invention to expire on the same date.²⁸³ The doctrine readily applies when the patent applicants cover exactly the same invention. Same-type double patenting is rooted in the statutory requirement that a patent be issued for a single invention.²⁸⁴ In that context, the USPTO requires the applicant to file a terminal disclaimer to cure the problem, which requires that applicant to surrender the extra patent term: both patents will expire at the earlier expiration date.²⁸⁵ In litigation, if one patent has already expired, then the second patent will be invalid if there has been double patenting.²⁸⁶

The courts, however, have not limited double-patenting proscriptions to the “same type” scenario. The courts have created an extra-statutory additional requirement of obviousness-type double patenting.²⁸⁷ As the Federal Circuit has explained, “The purpose of this rejection is to prevent the extension of the term of a patent, even where an express statutory basis for the rejection is missing, by prohibiting the issuance of the claims in a second patent not patentably distinct from the claims of the first patent.”²⁸⁸

In this context, obviousness operates as demonstrating possession. The applicant is deemed to be in possession of all the obvious variants of the invention, and she is not entitled to separate patents on all of them that expire at different times. The obvious variants are deemed within the possession of the inventor—she is entitled effectively to only one patent on all of those variations.

2. *Examples Where Obviousness Is Insufficient to Show Possession*

The Federal Circuit has not been consistent in its use of obviousness to demonstrate possession, however. The following examples are where obvious variants are deemed not within the possession of the relevant actor. Unfortunately, the courts have failed to offer explanations for the departure from treating obvious variants as satisfying a possession requirement.

²⁸³ *Id.* at 1382.

²⁸⁴ 35 U.S.C. § 101 (2012) (AIA); see *In re Longi*, 759 F.2d 887, 892 (Fed. Cir. 1985).

²⁸⁵ *Geneva*, 349 F.3d at 1378.

²⁸⁶ *Id.* at 1382.

²⁸⁷ *In re Longi*, 759 F.2d at 892.

²⁸⁸ *Id.*

*Obvious variants do not get the benefit of an earlier filing date.*²⁸⁹ Patent applications are rarely issued based on the originally filed application. Typically, the examiner offers a first rejection and then, after the applicant responds, issues the misnamed “final rejection.”²⁹⁰ The applicant then can file a continuing application.²⁹¹ The applicant generally is entitled to claim the filing date of that earlier application so long as no new matter is added.²⁹² To avoid new matter being added to later applications, however, there must be an adequate written description of the later-claimed subject matter.²⁹³ If there is inadequate support, then the applicant loses the benefit of that earlier filing date.²⁹⁴

The test for assessing whether there is adequate support in the earlier application for the later-claimed subject matter is the “possession” test, which has been described as follows: “[T]he test for sufficiency of support in a parent application is whether the disclosure of the application relied upon ‘reasonably conveys to the artisan that the inventor had possession at that time of the later claimed subject matter.’”²⁹⁵ The courts have expressly used the concept of possession to assess the adequacy of the patent’s support for later subject matter.

Perplexingly, however, the courts have made clear that obvious variants are not deemed within the applicant’s possession, resulting in the loss of the earlier filing date for those embodiments.²⁹⁶ The court has offered no explanation as to why a disclosure that renders certain embodiments obvious would not be

²⁸⁹ I explore this dynamic, and its broader consequences, in Timothy R. Holbrook, *The Written Description Gap*, 45 LOY. U. CHI. L.J. 345 (2013). In *The Written Description Gap*, I argue that the current law on written description creates a class of inventions that necessarily falls into the public domain; thus a gap in protection is created by the current doctrine. This gap arises because (1) the original patent applicant cannot claim the obvious embodiment under written description law; and (2) subsequent applicants cannot claim the variant because the original application, when used as prior art, will render the later application obvious.

²⁹⁰ See generally Mark A. Lemley & Kimberly A. Moore, *Ending Abuse of Patent Continuations*, 84 B.U. L. REV. 63, 66–68 (2004) (explaining the patent prosecution process and the use of continuation applications).

²⁹¹ *Id.* The applicant also has the option of filing a request for continued examination (RCE), 37 C.F.R. § 1.114 (2014), but that is not germane to this discussion.

²⁹² Holbrook, *supra* note 289, at 351–52.

²⁹³ *Tronzo v. Biomet, Inc.*, 156 F.3d 1154, 1558 (Fed. Cir. 1998).

²⁹⁴ *Id.*

²⁹⁵ *Ralston Purina Co. v. Far-Mar-Co, Inc.*, 772 F.2d 1570, 1575 (Fed. Cir. 1985) (quoting *In re Kaslow*, 707 F.2d 1366, 1375 (Fed. Cir. 1983)); *accord Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1563 (Fed. Cir. 1991).

²⁹⁶ *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1352 (Fed. Cir. 2010) (en banc) (“And while the description requirement does not demand any particular form of disclosure or that the specification recite the claimed invention *in haec verba*, a description that merely renders the invention obvious does not satisfy the requirement.” (citations omitted)).

sufficient to show that the applicant was in possession of those variants. This rule has little support in the antecedent case law²⁹⁷ and is inconsistent with the treatment of obviousness-as-possession elsewhere in patent law.

Obvious embodiments (likely) do not trigger the AIA's grace period. The AIA has effected a dramatic change on the U.S. patent system: the shift to a first-inventor-to-file regime instead of a first-to-invent system for awarding patents among competing inventors. Under the AIA, prior art is defined relative to the filing date: the invention is invalid if, before the application date, the invention is described in a patent or printed publication, is offered for sale or used publicly, or is otherwise publicly available.²⁹⁸

The AIA carved out a number of exceptions to this baseline rule. Of particular importance is the grace period provided for applicants. If an applicant disclosed her invention prior to filing an application, then, under 35 U.S.C. § 102(b)(1)(A), that disclosure does not count as prior art if it was made within one year of the filing date.²⁹⁹

The AIA also creates a second safe harbor, which effectively allows the applicant to antedate an invalidating reference by showing that she publicly disclosed the invention before the relevant potential prior art disclosure.³⁰⁰ In other words, if there is a patent, printed publication, public use, offer to sell, or other public disclosure by a third party prior to the applicant's filing date, the applicant can eliminate that prior art if she can show that she disclosed the subject matter publicly before those third-party acts (or that someone who derived the invention from her made an earlier disclosure).³⁰¹ The "first inventor to file" regime is actually a "first inventor to file or disclose" regime.³⁰² Under the AIA, if the applicant can show that she disclosed the

²⁹⁷ See Holbrook, *supra* note 289, at 355–58.

²⁹⁸ 35 U.S.C. § 102(a)(1) (2012) (AIA).

²⁹⁹ *Id.* § 102(b)(1) ("A disclosure made 1 year or less before the effective filing date of a claimed invention shall not be prior art to the claimed invention under subsection (a)(1) if—(A) the disclosure was made by the inventor or joint inventor or by another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor . . ."). For examples of how the AIA prior art provisions work, see MOORE ET AL., *supra* note 217, at 691–98.

³⁰⁰ See 35 U.S.C. § 102(b)(1)(B) ("A disclosure made 1 year or less before the effective filing date of a claimed invention shall not be prior art to the claimed invention under subsection (a)(1) if— . . . (B) the subject matter disclosed had, before such disclosure, been publicly disclosed by the inventor or a joint inventor or another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor.").

³⁰¹ See *id.*

³⁰² Applicants must take care, though, that such an antedating disclosure takes place within one year prior to the filing date, or else the disclosure acts as prior art and will preclude patent protection under § 102(a)(1). See *id.* § 102(a)(1).

subject matter claimed in the patent prior to such acts, or if a third party who derived the subject matter from her disclosed the subject matter before those acts, then it shall not be prior art to the claimed invention under subsection (a)(1).³⁰³

It is this latter exception to prior art, § 102(b)(1)(B), that has created a disconnect between obviousness and possession. The subsection does not define what constitutes the “subject matter” of the claimed invention. A strict interpretation would require the disclosure “of the claimed invention” to be exactly the same subject matter, excluding minor variants. Alternatively, the language could mean subject matter that is within the inventor’s possession, such as obvious variants. In other words, an antedating, inventor-generated disclosure that renders a potential piece of prior art obvious could be sufficient to trigger the exception, removing the prior art from consideration in a manner akin to *Stryker* in the first-to-invent context.

In its preliminary rules implementing the AIA, however, the USPTO posited that disclosures of obvious variants would not exclude the prior art; only a disclosure of the identical subject matter can be used to antedate a prior art reference.³⁰⁴ The initial regulation specifically noted that

[e]ven if the only differences between the subject matter in the prior art disclosure that is relied upon under 35 U.S.C. [§] 102(a) and the subject matter publicly disclosed by the inventor before such prior art disclosure are mere insubstantial changes, or only trivial or obvious variations, the exception under 35 U.S.C. [§] 102(b)(1)(B) does not apply.³⁰⁵

Thus, in contrast to the *Stryker* rule, an obvious variant would not be viewed as within the applicant’s possession.³⁰⁶

A similar disconnect has also arisen in the rules regarding assessment of who is truly the first to file a patent application on a claimed invention. Section 102(a)(2) of the AIA precludes a patent applicant from obtaining a patent if someone else had already filed an application for the invention, and that

³⁰³ *Id.* § 102(b)(1)(B).

³⁰⁴ Examination Guidelines for Implementing the First-Inventor-to-File Provisions of the Leahy–Smith America Invents Act, 77 Fed. Reg. 43,767 (July 26, 2012).

³⁰⁵ *Id.*

³⁰⁶ For a more rigorous discussion and critique of this rule, see Holbrook, *supra* note 289.

application eventually issues or is published.³⁰⁷ Section 102(b)(2) then creates exceptions to these forms of prior art.³⁰⁸ The important exception for demonstrating the disconnect between obviousness and possession is § 102(b)(2)(B), which parallels the exception found in § 102(b)(1)(B). This section excludes an earlier filed patent application if the inventor can show a public disclosure from the inventor prior to the filing date of the earlier, competing application.³⁰⁹ For example, Attila files an application, but discovers that Bubba³¹⁰ filed an earlier application on the same invention. Attila can effectively antedate Bubba's filing date by showing he publicly disclosed the subject matter before Bubba filed.

The same problem arises in § 102(b)(1)(B) that arose in § 102(b)(2)(B)—an assessment of what constitutes the “subject matter disclosed.” Does it include only the identical disclosure or does it ensnare obvious variants? The USPTO's preliminary regulations here also excluded obvious variants:

Even if the only differences between the subject matter in the prior art disclosure that is relied upon under 35 U.S.C. [§] 102(a) and the subject matter publicly disclosed by the inventor before such prior art disclosure are mere insubstantial changes, or only trivial or obvious variations, the exception under 35 U.S.C. [§] 102(b)(2)(B) does not apply.³¹¹

³⁰⁷ See 35 U.S.C. § 102(a)(2) (AIA) (“A person shall be entitled to a patent unless . . . (2) the claimed invention was described in a patent issued under section 151, or in an application for patent published or deemed published under section 122(b), in which the patent or application, as the case may be, names another inventor and was effectively filed before the effective filing date of the claimed invention.”).

³⁰⁸ Section 102(b)(2)(A) excludes previously filed applications where the subject matter was taken from the inventors from the later application. *Id.* § 102(b)(2)(A). This exception protects first inventors from losing their patent rights if someone “steals” their idea and wins the race to the patent office. The United States, therefore, does not have a pure first-to-file regime, in which the only relevant question would be who filed first and not the origins of the subject matter.

Section 102(b)(2)(C) excludes earlier filed applications and patents if the subject matter of both applications were owned by the same party or under an obligation to assign the patents to the same party. *Id.* § 102(b)(2)(C). So, for example, if two different inventors at Emory University filed for the same invention, but both were obligated to assign the patents to Emory, then the earlier filed application would not serve as prior art against the latter.

³⁰⁹ *Id.* § 102(b)(2)(B) (“A disclosure shall not be prior art to a claimed invention under subsection (a)(2) if— . . . (B) the subject matter disclosed had, before such subject matter was effectively filed under subsection (a)(2), been publicly disclosed by the inventor or a joint inventor or another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor . . .”).

³¹⁰ Thanks to my dogs, Attila and Bubba, for being very inventive dachshunds, and for allowing me to use something other than “Inventor A” and “Inventor B.”

³¹¹ Examination Guidelines for Implementing the First-Inventor-to-File Provisions of the Leahy–Smith America Invents Act, 77 Fed. Reg. 43,769 (July 26, 2012).

The USPTO thus was consistent in its interpretation of the two prior art exceptions, but in both situations it divorced obviousness from the concept of possession.

Curiously, the USPTO's final rules appear to retreat from the strict identity rule by removing the language regarding obviousness. The comments on the regulations noted that "there is no requirement that the disclosure by the inventor or a joint inventor be a verbatim or *ipsissimis verbis* disclosure of an intervening disclosure in order for the exception based on a prior public disclosure of subject matter by the inventor or a joint inventor to apply."³¹² The comments go on to explain "that the exception applies to subject matter of the intervening disclosure that is simply a more general description of the subject matter previously publicly disclosed by the inventor or a joint inventor."³¹³

Nevertheless, the rules do not state whether a publication that renders the prior art reference obvious will trigger exclusion under § 102(b). Instead, the guidelines suggest that something that is obvious may still not be sufficient to trigger the exception. The guidelines offer the following example. Suppose the applicant claims elements A, B, C, and D. An earlier disclosure by a third party discloses all four elements. Prior to that disclosure, however, the inventor had disclosed elements A, B, and C. Under the guidelines, only element D is available as prior art.³¹⁴ So the reference would have residual impact as a piece of prior art as to element D only. The guidelines make clear that this same approach will control for § 102(b)(2)(B).³¹⁵

This approach ignores the question, though, as to whether the inventor's disclosure could render the later publication obvious, and thus *completely* remove it as prior art. In other words, if element D is merely an obvious variant of the earlier disclosure, one could argue that it should be deemed within the possession of the inventor and thus should be sufficient to remove the intervening disclosure as prior art in its entirety. This obviousness-based approach would be comparable to the *Stryker* rule, where proof of an earlier conception that renders a piece of prior art obvious would be sufficient to eliminate the prior art. There was no residual prior art effect under *Stryker*. Under the USPTO's guidelines, it appears that obvious variants would not

³¹² Changes to Implement the First Inventor to File Provisions of the Leahy–Smith America Invents Act, 78 Fed. Reg. 11,024 (Feb. 14, 2013).

³¹³ *Id.*

³¹⁴ *See id.*

³¹⁵ *Id.* at 11,079.

eliminate the prior art reference, even though they arguably are within the possession of the inventor.

While the USPTO has stepped away from the strict identity rule, the guidelines still maintain the disconnect between obviousness and possession. The USPTO does not have substantive rule making authority, however. As a result, courts will be free to ignore this rule when the first cases on this issue are litigated.³¹⁶ The courts may interpret the new § 102 exclusions to allow an obvious variant to serve as an antedating reference to disqualify prior art.³¹⁷

It is not clear, however, why the courts have rejected the link between obviousness and possession in the above examples. It is theoretically inconsistent to do so, absent other countervailing policy considerations. At this point, though, the USPTO and courts have yet to articulate any justifications for their departure from treating obviousness as a form of possession.

C. *Benefits of Treating Obviousness as Constructive Possession*

The above analysis explores the underappreciated link between obviousness and possession, as manifest through the patent law doctrine of enablement. Of course, while this insight could be viewed as interesting, it begs the ultimate questions of “so what?” This section explores the benefit of conceptualizing obviousness as a variation of possession.

Thinking of obviousness as a form of possession leads to a number of normative conclusions. First, obviousness tracks the theoretical views of possession. The prior art does act as a public communication to others about the state of the art. Although the invention has not been actually created yet (and thus is not novel), the patent system has a clearly expressed policy that trivial, likely inevitable inventions are not entitled to patent protection.³¹⁸ Thus, there is a policy reason for treating obvious inventions as already within the possession of the public.

³¹⁶ Cf. *In re Fisher*, 421 F.3d 1365, 1372 (Fed. Cir. 2005) (“The MPEP and Guidelines ‘are not binding on this court, but may be given judicial notice to the extent they do not conflict with the statute.’” (quoting *Enzo Biochem v. Gen-Probe Inc.*, 323 F.3d 956, 964 (Fed. Cir. 2002))).

³¹⁷ See *Ass’n for Molecular Pathology v. U.S. Patent & Trademark Office*, 689 F.3d 1303, 1343–44 (Fed. Cir. 2012) (Moore, J., concurring) (reviewing longstanding practice of USPTO to issue gene patents even though not binding on courts), *aff’d in part, rev’d in part by Ass’n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S. Ct. 2107 (2013); David Orozco, *Administrative Patent Levers*, 117 PENN ST. L. REV. 1, 7 (2012) (noting that USPTO “lacks substantive rule-making authority, and its foray into substantive rulemaking will likely be reviewed by the federal courts”).

³¹⁸ See *supra* note 311 and accompanying text.

Additionally, a possession-based approach to obviousness offers a theoretical framework that is more faithful to the statutory language than other accounts. While 35 U.S.C. § 103 is fairly skeletal under both the Patent Act of 1952 and the AIA, both note that, to be eligible, the invention must be obvious “to a person having ordinary skill in the art to which the claimed invention pertains.”³¹⁹ The statute requires the standard to be technologically rooted—the invention must represent a non-trivial improvement in the state of the art. The possession analysis, too, is rooted in technology—is the public effectively in possession of the invention through the prior art disclosures by providing a description in the aggregate that enables the PHOSITA to make the invention?

This technologically based approach differs from other theoretical accounts of obviousness. Many commentators justify obviousness on a quasi-inducement theory: but for the patent incentive of exclusive rights, the invention would not have been created, or at least its creation would be delayed.³²⁰ The inducement theory, however, assumes that technologists actually internalize the incentive, that they invest in research to create non-obvious inventions in light of the prospect of obtaining a patent. It is not clear, however, that technologists truly respond to the patent incentive.³²¹ Moreover, it is clear that many inventors are not in fact driven by the potential for patent protection but instead by personal reasons to engage in the innovative enterprise.³²² The inducement theories of obviousness ignore the technical aspect of the doctrine, the need to avoid patenting of technologically trivial innovations, regardless of whether the incentive of the patent was needed to induce the creation of the invention. It would seem odd to conclude that a groundbreaking technology would be denied patent protection if the patent system itself did not incentivize it given the myriad of non-patent incentives that can lead to innovation.

Additionally, by directly linking obviousness to patent law’s strongest analog for possession—enablement—the law of both doctrines could evolve in an interactive and complementary fashion. For purposes of an adequate patent disclosure, we assess whether the PHOSITA could make and use the invention based on the knowledge in the field plus the inventor’s contribution to the art, as revealed in the patent. For obviousness, we would in essence ask whether

³¹⁹ 35 U.S.C. § 103 (2012) (AIA); 35 U.S.C. § 103 (2006) (1952 Act).

³²⁰ See *supra* note 37.

³²¹ See Janis & Holbrook, *supra* note 97, at 89–93.

³²² See Fromer, *supra* note 69, at 1771–76 (discussing personhood and labor incentives for inventors distinct from inducement of a patent).

the prior art, in the aggregate, enables one to make (though not use) the patented invention. This dynamic is beginning to evolve given the “obvious to try” standard that has emerged after the Supreme Court’s *KSR* decision.³²³ Under an obvious-to-try regime, issues of the extent of experimentation required and the predictability of the art are directly relevant. The courts have long wrestled with those same issues in the context of enablement, so it would seem appropriate to draw on those cases to better inform the obviousness standard. Indeed, creating a coherent doctrine regarding acceptable and unacceptable levels of experimentation would benefit both areas of the law, particularly one that mapped more realistically onto the way that innovation truly occurs.

The analysis would more accurately reflect what actually happens in the “real world,” removing some of the virtual distance between the patent law world and the innovation world.³²⁴ To the extent that obviousness and enablement mirror similar real-world dynamics, allowing them to evolve together, harnessing the realities of particular technological fields, may have the benefit of making patent law more accessible to the lay people who encounter it—inventors.

Finally, treating obviousness as a form of possession suggests that the areas where obvious variants are not considered within the possession of the relevant actor should be eliminated.³²⁵ The possession-based inquiry thus provides a reason for eliminating these disparate versions of obviousness.

CONCLUSION

In property, possession plays a crucial, yet ambiguous and controversial, role in creating property rights. In particular, possession’s role in communicating to third parties the nature of the right seems to unify various disparate aspects of the concept. These concepts resonate in the patent context, particularly because we are constantly generating new, albeit temporary, property rights and allocating them to the appropriate inventor.

³²³ See *supra* notes 250–52 and accompanying text.

³²⁴ Janis & Holbrook, *supra* note 97, at 86–90 (discussing the reduction of proximity between the law and the audience as a way of reforming patent law).

³²⁵ I offered one explanation in the context of the obvious-variant rule for the written description requirement—encouraging more robust disclosures in the patent document. See Holbrook, *supra* note 289, at 367–68. This benefit, though, comes at the cost of the lack of consistency in the law.

In particular, viewing the prior-art-based validity doctrines of novelty and obviousness as variations of possession, we can gain some insights into the ways those doctrines should function. This theoretical framework creates unifying rules that make the law coherent and simpler, which should aid in the development of the law. Moreover, by tying the concepts into the technical world, one would hope that scientists and other technologists engaged in the innovation enterprise can more readily ascertain what these patentability requirements actually are. The possession framework offers a methodology that harmonizes these various validity doctrines while affording a method of bridging the gap between inventors and the law.