

# Institutional Design and the Nature of Patents

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*ABSTRACT: What is a patent? That is, what is the nature of a patent? This question has split patent law. Some scholars (and judges) have argued that patents should be understood as a species of property, akin to plots of land, while others have reasoned that patents are best understood as a type of regulatory license, like Environmental Protection Agency permits to pollute. This debate has assumed multiple methodological forms as well. Some scholars (and judges) have approached the question from a formalist perspective, asking what other legal instruments patents most resemble, or how they have been treated historically. Others have approached it from a more functionalist perspective, asking instead what purpose patents are meant to serve and what legal rules would best effectuate that purpose. This debate has significant ramifications for many of patent law's most important institutional questions, including the allocation of power between the Federal Circuit and the United States Patent and Trademark Office ("PTO"), the constitutionality of inter partes review, and the legality of the PTO Director's practice of choosing which patent judges should sit on Patent Trial and Review Board panels. Yet the debate has also largely been submerged. Courts and scholars have often failed to recognize this central schism in patent law. The result is that proponents of each side of the debate have frequently talked past one another without acknowledging the fundamental conceptual principles that divide them. The primary object of this Essay is to describe and explain the deep structure of this disagreement. The Essay then turns to the institutional consequences of arriving at a conclusion regarding the nature of patents. I demonstrate that once one has arrived at a conceptual understanding of patents, answers to the most consequential institutional questions fall neatly into place.*

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## I. INTRODUCTION

What is a patent? That is, what is the *nature* of a patent? What sort of legal instrument is it? Is it a piece of property, like a tract of land or an automobile? Is it a government license, like a license to operate a business, except in this case a license to operate a government-sanctioned monopoly? Is it a form of “new property,” like an entitlement to welfare or Social Security benefits? Is it some combination of these things, or something else entirely?

For some readers, to pose the question in this fashion is to misunderstand the inquiry. To inquire what type of legal instrument a patent is hearkens back to the era before legal realism. This is how the formalist judges of the 19th century would reason: first, determine the category into which a legal instrument or claim fell; next, apply the legal rules that attached to objects or claims within that category.<sup>1</sup>

The legal realists rejected this entire mode of thinking. They argued that form should follow function, rather than the other way around.<sup>2</sup> Rather than first categorizing a legal instrument, courts should begin by determining what rules should be applied to that instrument in order to best effectuate the

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1. See Brian Leiter, *Legal Formalism and Legal Realism: What Is the Issue?*, 1–2, 6 (Univ. Chi. Law Sch. Pub. Law & Legal Theory Working Papers, Working Paper No. 320, 2010), [https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1178&context=public\\_law\\_and\\_legal\\_theory](https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?article=1178&context=public_law_and_legal_theory); see also, e.g., *United Mine Workers of Am. v. Coronado Coal Co.*, 259 U.S. 344, 385 (1922) (“Undoubtedly at common law an unincorporated association of persons was not recognized as having any other character than a partnership in whatever was done, and it could only sue or be sued in the names of its members, and their liability had to be enforced against each member.”).

2. See Felix S. Cohen, *Transcendental Nonsense and the Functional Approach*, 35 COLUM. L. REV. 809, 821 (1935).

policies and principles underlying it.<sup>3</sup> Only after the courts have determined the nature of the instrument should they turn to the question of categorizing it.<sup>4</sup> Put another way, any given legal instrument should be categorized according to how it operated—with that operation determined in light of underlying policies and principles—not according to its intrinsic or inherent nature.

For decades, it seemed as though the legal realist mode of thinking was, if not the unanimous approach among scholars, then at least the dominant one. In recent years, however, that has changed. The primary locus for that change has been patent law. Patent law scholarship is riven by an internal debate, one that has frequently bubbled to the surface, over how to classify patents.<sup>5</sup> Some scholars view patents as property, in the same sense that a house or an automobile is property.<sup>6</sup> Others conceive of a patent as a government license, akin to a license to emit a certain type of pollutant.<sup>7</sup> This debate has sometimes proceeded in a fashion that would have been familiar to 19th century formalist scholars. The two sides have debated the patent “type,” as if that is a question that exists independent of other functionalist considerations, while understanding full well that the determination of type will have practical consequences for how the law treats patents.

The primary object of this Essay is to describe and explain the deep structure of this disagreement. When scholars argue about a variety of institutional patent law questions, they are at bottom arguing about a single issue: what a patent really is. In many cases, scholars ignore or gloss over this underlying question. The result is that scholars with differing points of view sometimes appear to talk past each other, with each ignoring the considerations that are most fundamental to the other. Laying bare the underlying debate over the nature of patents will not necessarily bridge the divide between formalist and functionalist methodologies. But it should help clarify the terms of these debates, so that opposing camps can at least engage on the same turf.

This Essay’s secondary objective is to flesh out the institutional consequences of arriving at a conclusion regarding the nature of patents. Function should precede form, as I will argue below. But once the larger-scale questions as to function, and then form, have been answered, conclusions regarding intermediate questions about institutional arrangements follow directly. Those institutional arrangements have great significance for the operation of the patent system, and they implicate nearly every contemporary

3. See Leiter, *supra* note 1, at 2–5.

4. Cohen, *supra* note 2, at 838 (“If the functionalists are correct, the meaning of a definition is found in its consequences.”).

5. See Greg Reilly, Patent Non-Essentialism, 9–18 (Mar. 18, 2019) (unpublished manuscript) (on file with Author).

6. See *infra* note 13.

7. See *infra* note 14.

controversy about the America Invents Act<sup>8</sup> and the conduct and organization of the Patent and Trademark Office (“PTO”). Solving them in what amounts to one fell swoop would be a substantial step forward.

It is not surprising that the debate over patents has assumed this form. Denominating something as “property” carries significant constitutional consequences. “Property” cannot be taken without due compensation under the Fifth Amendment.<sup>9</sup> Under the same amendment, no one can be deprived of their “property” without due process.<sup>10</sup> “Property” also invokes the notion of private, common-law rights that predate the Constitution—the type of rights that cannot be impaired except after a jury trial (under the Seventh Amendment) in front of an Article III judge.<sup>11</sup> Of course, classifying something as property for one purpose does not necessarily mean classifying it as property for all purposes. Something can be “property” for purposes of the due process clause without being “property” for purposes of the takings clause.<sup>12</sup> But identifying something as property nevertheless carries substantial legal import, not to mention significant rhetorical force. Both sides of the debate understand the stakes.

In turn, these constitutional questions have significant ramifications for more ground-level institutional questions. In some cases, the significance might be strictly legal: A constitutional rule might prohibit a type of institutional arrangement. In other cases, the significance might be a matter of policy: If one conceives of patents in a particular fashion, that affects the policy-based soundness of a variety of institutional arrangements. The list of relevant issues includes (1) whether the PTO should have substantive rulemaking authority; (2) whether the PTO should use fees and other procedures to limit the number of patent applications and the number of grants; (3) whether administrative adjudication procedures such as *inter partes* review (“IPR”) (and retroactive IPR) are constitutional; and (4) whether the PTO director should have the authority to “stack” Patent Trial and Appeal Board (“PTAB”) panels by selecting the patent judges of his or her choice. More generally, the question of what patents “are” reaches to the very foundations of the patent system. There are few institutional choices within that system that do not at some point rest upon an underlying

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8. Leahy–Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

9. See U.S. CONST. amend. V (“No person shall . . . be deprived of . . . property, without due process of law; nor shall private property be taken for public use, without just compensation.”).

10. *Id.*

11. *N. Pipeline Constr. Co. v. Marathon Pipe Line Co.*, 458 U.S. 50, 69–70 (1982) (describing “[t]he distinction between public rights and private rights”); see also U.S. CONST. amend. VII (“In Suits at common law, where the value in controversy shall exceed twenty dollars, the right of trial by jury shall be preserved, and no fact tried by a jury, shall be otherwise re-examined in any Court of the United States, than according to the rules of the common law.”).

12. See Davida H. Isaacs, *Not All Property Is Created Equal: Why Modern Courts Resist Applying the Takings Clause to Patents, and Why They Are Right to Do So*, 15 GEO. MASON L. REV. 1, 36–41 (2007).

conception of the nature of patents. What patents “are,” and how they should be administered, are inextricable issues.

This Essay proceeds in three further parts. Part II addresses the question of what patents “are” and how they should best be understood. Part III unpacks the ramifications of this question for issues involving agency authority and substantive rulemaking, as well as non-Article III adjudication via IPR and related procedures. Part III then turns to more detailed institutional questions, including whether the PTO director should be permitted to stack IPR panels, and what other tools the PTO should use to administer the patent system. Part IV concludes.

## II. THE NATURE OF PATENTS

### A. TWO VISIONS OF PATENTS

There are two overarching approaches to the idea of what a patent “really is.” For some scholars (and courts), a patent is essentially another type of property, akin to a house, a piece of land, a chattel, and so forth.<sup>13</sup> For others, a patent is a regulatory entitlement, much like a permit to emit a form of pollution, a license to operate a business, and so forth.<sup>14</sup> In areas of law outside of patent law, these two notions often substantially overlap. For instance, a plot of land—real property—is typically subject to multiple types of regulation, which govern the allowed uses of that land. The most obvious example is zoning; some land can only be developed as residential property, some as residential or commercial, and so forth. Particular uses of the land might also be governed by regulation, if the land use involves operating some

13. Aldon Abbott et al., *Crippling the Innovation Economy: Regulatory Overreach at the Patent Office*, FEDERALIST SOC'Y, REG. TRANSPARENCY PROJECT (Aug. 14, 2017), <https://regproject.org/paper/crippling-innovation-economy-regulatory-overreach-patent-office>; see Frank H. Easterbrook, *Intellectual Property is Still Property*, 13 HARV. J.L. & PUB. POL'Y 108, 109 (1990); Richard A. Epstein, *The Disintegration of Intellectual Property? A Classical Liberal Response to a Premature Obituary*, 62 STAN. L. REV. 455, 462–72 (2010); Wendy J. Gordon, *A Property Right in Self-Expression: Equality and Individualism in the Natural Law of Intellectual Property*, 102 YALE L.J. 1533, 1581–83 (1993); Robert P. Merges, *What Kind of Rights are Intellectual Property Rights?*, in OXFORD HANDBOOK OF INTELLECTUAL PROPERTY LAW 57, 58 (Dreyfuss and Pila eds., 2018); Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 YALE L.J. 1742 (2007); Molly Shaffer Van Houweling, *Intellectual Property as Property*, in 1 RESEARCH HANDBOOK ON THE LAW AND ECONOMICS OF INTELLECTUAL PROPERTY LAW (Ben Depoorter & Peter Menell eds., forthcoming 2019); Steven Cherensky, Comment, *A Penny for Their Thoughts: Employee-Inventors, Preinvention Assignment Agreements, Property, and Personhood*, 81 CALIF. L. REV. 595, 642–46 (1993); see also Reilly, *supra* note 5, at 9–18 (cataloguing other sources).

14. See Julie Cohen, *Property as Institutions for Resources: Lessons from and for IP*, 94 TEX. L. REV. 1, 3–4 (2015); Mark A. Lemley, *Property, Intellectual Property, and Free Riding*, 83 TEX. L. REV. 1031, 1031–32 (2005); Jonathan S. Masur, *Regulating Patents*, 2010 SUP. CT. REV. 275, 275–80 (2011); Peter S. Menell, *Governance of Intellectual Resources and Disintegration of Intellectual Property in the Digital Age*, 26 BERKELEY TECH. L.J. 1523, 1531–33 (2011); Melissa F. Wasserman, *The Changing Guard of Patent Law: Chevron Deference for the PTO*, 54 WM. & MARY L. REV. 1959, 1962 (2013); see also Mark A. Lemley, *Taking the Regulatory Nature of IP Seriously*, 92 TEX. L. REV. SEE ALSO 107, 107–08 (2013) [hereinafter Lemley, *Taking the Regulatory Nature of IP Seriously*].

type of business, emitting pollution, or the like. One way of stating the underlying question of a patent's type is to ask: Is a patent more like the plot of land, or is it more like the zoning rule?

In some instances, this issue is discussed and described explicitly. Some scholars have argued outright that a patent should be viewed as one type of legal instrument or the other.<sup>15</sup> In other instances, however, the question has been submerged. Scholars (and courts) have advanced lines of argument that necessarily rest upon the premise that a patent is either property or a regulatory license, without explicitly stating or defending that premise.<sup>16</sup>

It is important to note that the question of how to categorize a patent is *not* the same as asking whether patents are best justified on utilitarian or deontological terms.<sup>17</sup> A utilitarian thinker could believe that patents should be treated as property because doing so will lead to greater innovation or otherwise superior outcomes.<sup>18</sup> Or, conversely, a utilitarian could believe that patents should be treated as regulatory licenses for the same reason: The innovation system will benefit if patents are not propertized.<sup>19</sup> The same is true for deontological perspectives: A deontologist could favor treating patents as property on the basis of Lockean property theory<sup>20</sup> or a theory of personhood.<sup>21</sup> Or the same deontological thinker might decide that patents are best conceived of as regulatory licenses precisely because they do not satisfy the deontological predicates to qualify as property.<sup>22</sup> Of course, this is not to say that the philosophical justification for patents is unconnected with how patents should be categorized. An individual's view of why patents exist

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15. See generally Emily Michiko Morris, *Res or Rules? Patents and the (Uncertain) Rules of the Game*, 18 MICH. TELECOMM. TECH. L. REV. 481 (2012) (comparing two mutually exclusive views on patents).

16. See Masur, *supra* note 14, at 277–78.

17. See generally ROBERT P. MERGES, JUSTIFYING INTELLECTUAL PROPERTY (2011) (defending patent rights on deontological grounds).

18. Jonathan M. Barnett, *The Patent System at a Crossroads*, 41 REG. 44, 47 (2018) (“Perhaps of greatest concern, substantially diluting the property-like attributes of patents endangers the viability of upstream R&D-intensive firms that often deliver the most dramatic innovations but require a secure intellectual property portfolio in order to monetize those innovations through commercialization relationships.”).

19. Masur, *supra* note 14, at 297–98.

20. MERGES, *supra* note 17, at 31–67.

21. Margaret Jane Radin, *Property and Personhood*, 34 STAN. L. REV. 957, 957–59 (1982) (proposing a theory of property and intellectual property based on personhood and autonomy).

22. Brief for 72 Professors of Intellectual Property as Amici Curiae in Support of Respondent, *Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC*, 138 S. Ct. 1365 (2019) (No. 16-712), 2017 WL 5171470, at \*3–4 (“American patent rights exist solely because of federal statutes enacted by Congress pursuant to Article I. ‘Under the common law the inventor had no right to exclude others from making and using his invention’. . . . As statutory rights created in Congress’s discretion, Congress may ‘select[] the policy which in its judgment best effectuates the constitutional aim’ and ‘set out *conditions* and tests for patentability.’” (quoting *Deepsouth Packing Co. v. Laitram Corp.*, 406 U.S. 518, 525–26 (1972); *Graham v. John Deere Co. of Kan. City*, 383 U.S. 1, 6 (1966))).

will inform that individual's conception of the purposes that patents should play, which will in turn inform the same individual's view of how patents should be categorized. But there is no necessary or determinative linkage, and the questions are largely separate. The issue here—the more important one, from an administrative perspective—is whether patents should be understood as property or as regulatory instruments.

This question, whether explicitly stated or not, is central to many of the most pressing contemporary debates regarding patent law, particularly debates over the administrative structures used to govern the patent system. First, and perhaps most importantly, one's view of a patent's form implicates a series of constitutional rules governing patent law. One issue is whether patents are "property" for purposes of the Due Process and Takings Clause. Another, related question is whether patents are private rights—typically conceived as common law rights that exist independently of their creation by Congress<sup>23</sup>—and thus only defeasible via proceedings before juries (under the Seventh Amendment) and judges with life tenure (under Article III). This latter question was the subject of the Supreme Court's recent decision in *Oil States*,<sup>24</sup> discussed further below. To be sure, a baseline view that a patent is property (or not) is not determinative with respect to all of these questions. A patent could be property for purposes of the Due Process Clause without being property for purposes of the Takings Clause. A patent could be property but nonetheless constitute a public right for Article III purposes. The constitutional questions are not answered purely by typology. But the importance of how a patent is classified should not be understated. Constitutional views of patents typically come in packages: The more one believes that a patent is property, the more likely one is to believe that it is a private right, that it is protected by the due process clause, and so forth. It is no accident that attitudes about one constitutional question tend to spill over toward the next. They are all related through a set of baseline beliefs about patent form.

In addition, one's view of the patent form is tied to a series of sub-constitutional patent policy questions. If patents are property in the canonical sense, then they should be administered as real and chattel property typically are. That is, the rules governing patents should be made by courts, in standard adversarial judicial proceedings, with judges and juries. Those rules should be stable and straightforward.<sup>25</sup> The government should facilitate the acquisition of patents, or at least should not impose significant hurdles to it.

23. *N. Pipeline Constr. Co. v. Marathon Pipe Line Co.*, 458 U.S. 50, 69–70 (1982) (describing "[t]he distinction between public rights and private rights").

24. *Oil States*, 138 S. Ct. at 1378.

25. See Thomas W. Merrill & Henry E. Smith, *The Property/Contract Interface*, 101 COLUM. L. REV. 773, 776 & n.11 (2001) (discussing the "limited number" and "standard forms" of property rights and describing the *numerus clausus* principle as "a civil law principle limiting the number

On the other hand, if patents are better understood as regulatory licenses, then they should be administered in the same fashion as other types of regulatory schemes. The rules governing patents should be made by administrative agencies under broad grants of authority, subject only to limited scrutiny from courts.<sup>26</sup> The agency that makes patent rules should think broadly about social welfare when choosing those rules, as agencies typically do.<sup>27</sup> The rules governing patents should be flexible and revised frequently to maintain pace with changing technology and changing market conditions. The government should only permit patents where the social value of doing so is net positive, and it should not hesitate to impose barriers to obtaining patents when those barriers would eliminate harmful patent rights.<sup>28</sup>

The issue, then, is starkly posed. “Patents as property” and “patents as regulatory rights” present two dramatically different visions of how the patent system should be administered, and which institutions should have authority for setting the rules that govern that system. The next question is how to select between these competing visions.

#### B. TWO METHODOLOGIES FOR DETERMINING PATENT FORM

There are two predominant ways of answering the question as to what a patent actually “is.”<sup>29</sup> Each finds adherents within contemporary scholarly writing and judicial opinions on patent law.<sup>30</sup> Neither methodology inherently favors either conception of patents, and neither is outcome determinative. Nonetheless, each lends itself more naturally to one view of patent type than the other.

of types of estates”); Andrew C. Michaels, *Patent Transfer and the Bundle of Rights*, 83 BROOK. L. REV. 933, 942–44 (2018) (applying the *numerus clausus* principle to patents).

26. Masur, *supra* note 14, at 304–24.

27. See generally Jonathan S. Masur, *CBA at the PTO*, 65 DUKE L.J. 1701 (2016) (discussing how the U.S. Patent & Trade Office does not properly employ cost-benefit analysis, unlike other administrative agencies).

28. Christopher Buccafusco, Mark A. Lemley & Jonathan S. Masur, *Intelligent Design*, 68 DUKE L.J. 75, 87–89 (2018); David Fagundes & Jonathan S. Masur, *Costly Intellectual Property*, 65 VAND. L. REV. 677, 686, 692, 705 (2012); Jonathan S. Masur, *Costly Screens and Patent Examination*, 2 J. LEGAL ANALYSIS 687, 701, 716 (2010).

29. This issue is distinct (though of course related) to the sub-question of whether judges should be formalist or functionalist with regard to the particular doctrines that make up patent law. That topic has itself been the subject of much discussion and controversy. See generally David O. Taylor, *Formalism and Antiformalism in Patent Law Adjudication: Precedent and Policy*, 66 SMU L. REV. 633, 637 (2013) (analyzing the records of both the Federal Circuit and Supreme Court in regard to their “expression of policy-based justifications for legal doctrines in the field of patent law.”). But it has proceeded distinctly from the issue of what a patent “is” because it concerns different sources of law (statutory rather than constitutional) and different questions (substantive doctrinal issues rather than institutional design issues).

30. See, e.g., *supra* notes 13–18, 21–22 and accompanying text.

The first approach is properly classified as formalist, as it largely follows the formal methodologies that predominated American law in the 19th and early 20th centuries. According to formalist legal thought, the first step in analyzing a legal instrument such as a patent is to determine the true, underlying nature of that instrument by reference to its extant form.<sup>31</sup> That is, a formalist would ask: What other types of legal instruments does a patent resemble?<sup>32</sup> What forms has it traditionally taken throughout history?<sup>33</sup> When patents first came into existence, in other countries or in the early common law tradition, how were they understood? Once a patent had been classified in this fashion, formalists would then turn to the legal implications of the classification. They would ask what legal rights and duties accompany the chosen patent form. Form thus precedes function, hence the term “formalist.”

Much of the constitutional and institutional debate over patents has proceeded along formalist lines: Courts and scholars have frequently begun by inquiring what a patent “is,” and then secondarily determined which functions appropriately follow that form. A significant reason for this is the shape of contemporary constitutional doctrine. To a substantial (though hardly complete) degree, constitutional doctrine has evolved along relatively formalist lines. Take, for example, the Supreme Court’s doctrine on public vs. private rights, which determines whether patents can be adjudicated by non-Article III tribunals—the question at issue in *Oil States*.<sup>34</sup> Whether a right is “public” or “private” is determined by whether it was created by federal statute—and thus is presumably subject to conditions that Congress might place on the right—or whether it derives from common law and thus predates any type of congressional intervention.<sup>35</sup> This is a formalist inquiry, considering the nature of patent rights and their historical origin, rather than function and policy. Similarly, the doctrine governing whether patents are property subject to the takings clause begins with an inquiry into whether patents are properly classified as property—an issue regarding their form.<sup>36</sup> Functional considerations about whether patent policy would be furthered or hindered by takings law are not explicitly part of the inquiry. Scholarly debates have unsurprisingly followed this mold.

31. See, e.g., C.K. ALLEN, *LEGAL DUTIES AND OTHER ESSAYS IN JURISPRUDENCE* 226 (1931) (inquiring as to the “essential” distinction between a crime and a tort).

32. C.C. Langdell, Lecture, *Patent Rights and Copy Rights*, 12 HARV. L. REV. 553, 553 (1899) (“As the literary, musical, or artistic creation of an author, musical composer, or artist is embodied in a chattel and as an author, musical composer, or artist is always assumed to own the chattel which embodies his creation, it follows that an author, musical composer, or artist owns his literary, musical, or artistic creation, regarded as a chattel, as absolutely as he can own any chattel.”).

33. Abbott et al., *supra* note 13.

34. *Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC*, 138 S. Ct. 1365, 1370 (2018).

35. *Id.* at 1372–75.

36. See Jonathan S. Masur & Adam K. Mortara, *Patents, Property, and Prospectivity*, 71 STAN. L. REV. (forthcoming 2019) (manuscript at 24–26), [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3141520](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3141520).

Formalism is an intuitive fit for patent law, largely because of path dependence and nomenclature. Patents are unusual legal instruments, in that they provide rights over inchoate inventions, rather than physical objects. Accordingly, it is understandable that courts and scholars would seek to analogize patents to other types of legal instruments in order to better understand them. There is a strong taxonomic urge within law, and it is never more present than when a type of right does not immediately fall into an existing category. Moreover, the result of this taxonomic exercise was to invent the classification of “intellectual property,” into which patents, copyrights, and sometimes trademarks and trade secrets are now placed. There is a logic to the use of the word “property” in describing patents. Like other forms of property, patents can be owned by an individual (or corporation) and can be traded or sold from one individual to another.<sup>37</sup> Also like property, patents convey a right to exclude.<sup>38</sup> Patents were also created at least in part to solve the same sort of public goods problem that motivates the existence of real property, though of course other justifications for both patents and real property exist as well.

Nonetheless, the notion that patents are a type of property has taken on something of a life of its own. The phrase “intellectual property” is regularly invoked as an argument that patents should be treated as a species of property.<sup>39</sup> At best, this is a type of logical shorthand: If patents have the characteristics of property, then they should be treated as property for other purposes. At worst, it has become an exercise in allowing mere nomenclature to assume legal significance. After all, there was nothing inevitable about the phrase “intellectual property.” Patents could just as easily have been described as “intellectual licenses” or “inventive monopolies” or any number of other formulations, none of which would invoke the language of property. For these reasons and others, formalism has remained central to contemporary legal arguments about patents in a manner that is, if not unique, then at least uncommon within American legal thought. Its influence over doctrine and scholarship is undeniable.

The second methodology for classifying patents derives from the realist tradition, which largely displaced formalism in American legal scholarship by the 1930s. The realist (or “functionalist”)<sup>40</sup> approach is to ask first what functions patents should serve, or what policies they should promote, and then to delineate the legal metes and bounds of patents in the manner that

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37. See 35 U.S.C. § 261 (2012).

38. See *id.* § 271(a)–(b).

39. See, e.g., Abbott et al., *supra* note 13; Cherenky, *supra* note 13, at 641–53; Gordon, *supra* note 13, at 1581–1609; Merges, *supra* note 13, at 5–6; Van Houweling, *supra* note 13. See generally Epstein, *supra* note 13 (discussing the robust nature of intellectual property rights).

40. Functionalism is best understood as a species of realism. The approach I describe here is functionalist in nature, and so I employ the word functionalist to denote the particular version of realism in operation.

best serves those functions.<sup>41</sup> Whereas, for formalists, form precedes function, for realists it is the opposite. For this reason, realism is closely associated with functionalism and pragmatism, which similarly privilege the policies a legal right is meant to promote over other considerations in deciding upon the extent of that right. Realism has been ascendant within the legal academy ever since the days of Oliver Wendell Holmes,<sup>42</sup> and thus it should not be surprising that much of patent law has taken on a realist bent. However, for the reasons noted above, realism is not as dominant in the field of patents as it is in other areas of legal thought.

As the introduction explains, the question of what a patent “is” would strike a functionalist as backwards. The functionalist approach is not to ask how a patent should be classified. Instead, a functionalist would first inquire as to the policies a patent was meant to further. The functionalist would then assign rights and duties to patents in the manner that would further those policies. The patent would then subsequently be classified or categorized in accordance with those policies. One can thus imagine the inquiry into patent type, for a functionalist, as an inquiry into the end-step of this process. It necessarily entails an antecedent examination of the policies and purposes that underlie patents.

Neither the formalist nor the functionalist approach necessarily dictates an answer to the question of what type of legal instrument a patent is. It is possible to conclude, using a formalist methodology, that patents are property, as many scholars explicitly or implicitly have.<sup>43</sup> The same is true for courts; for instance, courts have used formalist methodology in concluding that patents are property subject to the takings clause.<sup>44</sup> It is also possible to conclude as a matter of formalism that patents are administrative licenses, not property. *Oil States*, in which the Supreme Court concluded as a matter of formalist reasoning that patents are public rights, illustrates this second possibility.<sup>45</sup> Similarly, a functionalist judge or scholar could conclude that patents deserve the same panoply of rights and protections as property and are thus properly thought of as a species of the same.<sup>46</sup> Or she could believe that the innovation system is best supported by patents that are governed by

41. See Cohen, *supra* note 2, at 821–23.

42. BRIAN Z. TAMANAHA, *BEYOND THE FORMALIST-REALIST DIVIDE: THE ROLE OF POLITICS IN JUDGING* 1–2 (2010).

43. Easterbrook, *supra* note 13 at 109; see, e.g., sources cited *supra* note 13.

44. See, e.g., Fla. Prepaid Postsecondary Educ. Expense Bd. v. Coll. Sav. Bank, 527 U.S. 627, 642 (1999) (“Patents . . . are surely included within the ‘property’ of which no person may be deprived by a State without due process of law.”).

45. *Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC*, 138 S. Ct. 1365, 1372–75 (2018); see also Lemley, *supra* note 14, at 117.

46. See generally Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 *YALE L.J.* 1742 (2007) (explaining the how intellectual property could be viewed as a species of property).

rules that make them seem more akin to regulatory licenses.<sup>47</sup> Methodology is not inextricably linked to outcome.

Nonetheless, there is an inherent affinity between formalist methodologies and the view that patents are property, and between functionalist methodologies and the view that they are regulatory licenses. Part of the reason for this is that there is, in fact, a long history of patents and patent-type rights that predates the United States Constitution.<sup>48</sup> Formalist inquiries that emphasize the role of history will accordingly tend to support the conclusion that patents are property. On the other hand, realist/functionalist thinking generally resists the imposition of bundles or packages of rights, on the theory that a particular bundle may be ill-suited to a particular type of policy problem. The functionalist would instead favor disaggregating the bundle into helpful and unhelpful rights. The former would be kept, and the latter discarded. It is thus unsurprising that, as an empirical matter, those scholars who have argued for patents as property have largely done so using formalist methodologies, while those scholars who employ realist or functionalist methodologies have generally come down on the side of patents as regulatory licenses.<sup>49</sup>

A full-fledged analysis of the comparative strengths and weaknesses of formalism and functionalism, and an argument in favor of employing one or the other, is well beyond the scope of this—or really any—Essay. Such a debate was the subject of an entire movement in legal thought that spanned decades and volumes worth of scholarship, and I will not attempt to recapitulate even part of it.<sup>50</sup> Instead, I will proceed from a functionalist perspective, which encompasses the notion that the role of courts is to formulate patent law that effectuates the policy goals set forth in the patent statutes enacted by Congress. In the next Section, I sketch a functionalist analysis of patents, referencing the institutional questions at issue.

### C. THE FUNCTIONALIST APPROACH

In many technical fields, patents are an essential input to the innovation economy.<sup>51</sup> Without patents, pharmaceutical firms, medical device

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47. Cohen, *supra* note 14, at 3–4, 32–50.

48. *Oil States*, 138 S. Ct. at 1381 (Gorsuch, J., dissenting) (“As I read the historical record presented to us, only courts could hear patent challenges in England at the time of the founding.”).

49. See sources cited *supra* notes 10–11 and 13–19. I deliberately employ two formulations that are not the converse of one another here in order to indicate that the methodology-outcome connection is not complete. There are some formalists who believe that patents are best understood as regulatory licenses. Accordingly, not all formalists believe that patents are property, and not all courts and scholars that see patents as licenses are functionalist.

50. See generally Cohen, *supra* note 2 (dismantling arguments that judges merely discover the law found in statutory texts, rather than creating it themselves).

51. This is not to say that it is impossible to imagine an innovation system that functioned without patents. See generally *e.g.*, Daniel J. Hemel & Lisa Larrimore Ouellette, *Beyond the Patents-Prizes Debate*, 92 TEX. L. REV. 303 (2013) (describing other legal tools available for creating

manufacturers, chemical companies, and enterprises in a host of other areas of technology might lack the incentives to develop innovative products. At the same time, however, patents can impede innovation if they are not granted properly. First, and most obviously, patents can be used to impede the development of follow-on research by blocking access to patented technology. If firms that wish to innovate have to worry about licensing or avoiding existing patent rights, the pace of their innovation will slow.<sup>52</sup> Second, if the PTO grants low-quality patents, meaning patents that are not backed by meaningful innovation, firms will have incentives to pursue these patents instead of engaging in genuine innovation.<sup>53</sup> A patent, even a weak one, is valuable, and a firm might prefer to expend resources pursuing a modestly valuable patent on the cheap rather than taking the uncertain path of actual research and development. Finally, each additional patent—whether high-quality or low-quality—creates costs for innovators merely by virtue of coming into existence. Other firms must search through the stock of existing patents to determine what is or is not already protected, and then must expend further resources to determine whether they need to license existing rights (and then negotiate the licensing fees if necessary).

The upshot is that patents are like the three bears' porridge: There is a number and quality that is "just right," neither too hot nor too cold. More patents are not always better. The way to ensure a well-functioning patent system is to promote the issuance of high-quality patents when possible and restrain the issuance of poor-quality patents when necessary. And because this sorting process can be difficult, the institutions charged with performing the sort—the PTO and the courts—should have access to whatever policy tools will best enable them to separate the rice from the rocks.<sup>54</sup>

The innovation system is also constantly in flux, as both technology and markets change and adjust. Technological changes are the more obvious part of this equation. The cutting-edge technologies of today are not only qualitatively different from the leading edge of research of centuries or even decades ago, but they are created and composed in different ways and with different inputs. Patents often involve an aggregation or anti-commons problem: To build and sell an invention incorporating many underlying inventions, the manufacturer must license multiple existing patent rights. For this reason, changes in the structure of how products are created, including

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innovation incentives). Rather, the point is that if one holds government funding constant, patents are important if not essential.

52. Peter S. Menell, *Tailoring Legal Protection for Computer Software*, 39 STAN. L. REV. 1329, 1330–31 (1987); Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839, 848 (1990).

53. Stephen Yelderman, *The Value of Accuracy in the Patent System*, 84 U. CHI. L. REV. 1217, 1221–22 (2017).

54. *Is That a Rock in My Rice?*, INDIA MIKE, <https://www.indiamike.com/india/indian-cooking-and-cuisine-f12/is-that-a-rock-in-my-rice-t5778> (last visited May 18, 2019) (describing how small rocks can sometimes get mixed into rice dishes as a part of the cooking process).

changes to the number and type of inputs, can dramatically affect the costs and benefits of the patent system for those types of goods.

But changes in market structure can have equally large impacts on the operation of the patent system in various technological fields. Patents are, of course, only one way of solving the public goods problem that underlies innovation. Grants, prizes, and tax incentives are also possibilities, though they play a smaller role in the contemporary innovation system.<sup>55</sup> They are also only one mechanism by which firms can obtain supra-competitive profits from their inventions. Firms might also be able to avail themselves of first-mover advantage, trademark and branding, network effects, and a variety of other market-based mechanisms.<sup>56</sup> These options might be more or less available for different types of technologies, and they might become more or less available over time as the markets for those technologies shift. As the availability of these alternatives increases (decreases), the benefits of patents decrease (increase) and the benefit/cost balance for patent rights shifts.

All of this means that patent law needs to be flexible enough to accommodate the rapid pace of change in both technology and the markets that surround that technology. The flexibility should be both temporal and subject matter-based. That is, patent law should be able to adjust over time in keeping with changing technologies and market conditions. But it also needs to be able to adjust to different conditions in different industries, precisely because the costs and benefits of patents in various industries can vary so widely.<sup>57</sup> Despite patent law's stated neutrality among technical fields, there are indications that the law has moved in this direction.<sup>58</sup> To be sure, there are benefits to stability in patent policy. Firms that rely upon patents (or the absence of patents) for their business will be willing to invest more in research and development if they are more certain "that they will [still] be able to obtain patents"<sup>59</sup> once that R&D is complete.<sup>60</sup> At the same time, stability and flexibility need not be mutually exclusive—patent policymakers could protect

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55. See generally Hemel & Ouellette, *supra* note 52 (describing different legal options for creating incentives for innovations).

56. Robert P. Merges, *Uncertainty and the Standard of Patentability*, 7 HIGH TECH. L.J. 1, 28–33 (1992) (explaining how innovation can arise in the absence of patent protection).

57. See generally Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575 (2003) (analyzing the possibility of creating industry-specific patent rules using traditional tools of patent law).

58. *Id.* See generally DAN L. BURK & MARK A. LEMLEY, THE PATENT CRISIS AND HOW THE COURTS CAN SOLVE IT (2009) (discussing the ways in which courts have created industry-specific patent rules). This approach is nowhere more visible than in the law of patentable subject matter. In recent years, it has evolved to make it much more difficult to patent software, business methods, and some types of diagnostic tests, while leaving other types of technology relatively untouched. See *Alice Corp. Pty. v. CLS Bank Int'l*, 573 U.S. 208, 226–27 (2014); *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 92 (2012).

59. Masur & Mortara, *supra* note 36 (manuscript at 8).

60. *Id.*

existing reliance interests while still adapting the law rapidly and regularly.<sup>61</sup> The bottom line is that the patent law that functioned well for 19th century machinery should not be expected to function nearly so well for 21st century software and semiconductors.

### III. PATENT LAW AND INSTITUTIONAL ANALYSIS

This Part considers the implications of the foregoing functional analysis for the institutions that govern patent law. Those institutions must be expert and flexible, and they must have at their disposal a wide range of policy tools. Accordingly, this Part addresses a number of institutional questions of particular importance to patent law. It begins with the baseline issue of substantive rulemaking authority, and then expands the analysis to encompass questions related to the use of a wide variety of policy levers, IPR, and the composition of the PTAB.

#### A. SUBSTANTIVE RULEMAKING

For reasons that will become clear in later subsections, the question of which institutions should have the authority to make patent policy is first-order and informs nearly every other institutional issue that might arise. Patent law, nearly uniquely among major substantive areas of federal law, is governed almost exclusively by judicial decisions. The PTO has never had substantive rulemaking authority.<sup>62</sup>

I have written separately about this issue, and so I will not explore it in great depth here.<sup>63</sup> The general idea is that the need for legal flexibility—the requirement that the law update to keep pace with changes in markets and technology—necessitates an institutional actor that can move quickly.<sup>64</sup> In addition, the technical and economic complexity of patent law augurs in favor of an institutional actor with the informational capacity and expertise to successfully manage such an intricate system of law. These are the same considerations that counseled in favor of creating the EPA, the Department of Energy, and most other now-familiar administrative agencies.<sup>65</sup> They counsel equally strongly in favor of vesting the PTO with substantive rulemaking authority and then providing it with the resources necessary to

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61. *Id.* at 18–50.

62. Masur, *supra* note 14, at 279.

63. *Id.* at 304–25.

64. Jonathan Masur, *Judicial Deference and the Credibility of Agency Commitments*, 60 VAND. L. REV. 1021, 1071 (2007) (“Agency attempts to regulate industries and markets characterized by rapid advancements with permanent regulations—and permanent regulations that operate on the vanguard of technology—thus hold the possibility of catalyzing significant error costs if the regulatory terrain shifts quickly. Yet these are precisely the circumstances under which an agency’s expertise is of greatest value, and in which agencies have the greatest institutional advantages vis à vis other decisionmaking bodies.”).

65. See Masur, *supra* note 14, at 302–04.

implement sound patent policy. Or, put another way, patents as regulatory licenses have enough in common with other types of regulation and regulatory licenses that they should be governed similarly. The outlier status of patent law, as one of the only areas that lacks an agency with substantive authority, should indicate that something is amiss.

Of course, if one viewed patents as a species of property, this analysis would be very different. For the most part, real and chattel property have been regulated by courts throughout their existence. The common law system of property has evolved to the point that the rules are now thought to be generally sensible and well-tuned to the economic considerations that property presents.<sup>66</sup> Moreover, the economics of real property do not change rapidly, and the technology surrounding real property changes even less frequently. Accordingly, there is no need for an expert agency to manage the system of property on an ongoing basis. For the reasons expressed in foregoing Sections, I do not believe these arguments to be persuasive. But the differential institutional management of real property, on the one hand, and—for instance—environmental permits, on the other, illustrates the schism between the regulatory and property visions of patents.

#### B. PTO FEES AND SCREENS

A subsidiary question is what sorts of policy levers the PTO may use to implement its objectives. For instance, instead of making substantive rules of patent law, may the agency use patent application and maintenance fees, and other procedural or financial hurdles, to affect the number and types of patents granted and maintained? For instance, could the agency establish high application fees or maintenance fees with the goal of weeding out low-value patents that clutter and impede the innovation system?<sup>67</sup> This issue is of particular salience because the PTO, despite lacking true substantive rule-making authority, *does* have the power to set its own fees and determine its own procedures. Fee-setting is thus an alternative route by which the PTO might effectuate policy objectives that it cannot achieve directly.

Here, too, the divergence between property and regulatory-licensing visions of patents is stark. If one views patents as property, there is little reason to impose additional hurdles to the granting or utilization of additional property rights. (Or, at minimum, the PTO should bear a heavy burden of showing why it should not simply grant the right.) If a patent application meets the requirements set forth by the Patent Act, the PTO should grant it. The fewer costly impediments, the better. This perspective is strongly driven by a view of patents as property that minimizes the negative externalities of

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66. See generally RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* (8th ed. 2011) (describing an economic approach to common law property rights).

67. See Fagundes & Masur, *supra* note 28, at 723–25; Masur, *supra* note 28, at 696–98.

patent ownership. If properly granted patents are viewed as net beneficial, then there is no reason to stand in the way of granting more of them.

On the other hand, a regulatory licensing view of patents would compel quite a different result. This view is driven in large degree by the idea that patents can produce negative externalities, even if they are granted properly and meet all of the statutory conditions for patentability.<sup>68</sup> This view of patents opens space for regulatory management of the patent system to constrain the number and type of granted patents in order to avoid congestion and anti-commons problems. The traditional patentability tests—novelty, nonobviousness, and patentable subject matter—are not always well-suited to this task. Just because a patent is novel and nonobvious does not mean that granting it will increase overall social welfare. If the patent contributes more to congestion than it does to innovation, its overall effect will be negative. And certainly, patents that are improvidently granted can act as sand in the gears of innovation as well. For this reason, higher patent application and maintenance fees, which act as costly screens, can produce overall benefits for the patent system, despite impeding the granting of individual patents.

More generally, if one views patents as regulatory licenses, it makes sense to allow the PTO whatever policy tools are available as mechanisms for regulating patent grants. Application and maintenance fees are common throughout the administrative state; companies pay substantial fees when applying for pollution permits, for instance.<sup>69</sup> But other than nominal fees to register deeds or obtain building permits, these types of fees are almost unheard of in the context of real and chattel property. Where they exist, they are usually disfavored and accepted only as an administrative necessity.<sup>70</sup> The idea that the government might impose a high fee on land transfers in order to block all but the most valuable exchanges would be anathema to most property scholars. Hence the stark divide over the use of these types of mechanisms in administering patent law.

### C. *INTER PARTES REVIEW*

IPR is the process by which third parties can challenge granted patents before panels of PTO patent judges. IPR has been a subject of considerable recent debate,<sup>71</sup> stemming from the constitutional challenge levied against

68. Masur, *supra* note 28, at 713–14.

69. Charlotte L. Neitzel & Colin Harris, *Assessing and Addressing Environmental Liabilities*, ROCKY MOUNTAIN MINERAL L. FOUND., <https://www.rmmlf.org/publications/digital-library/assessing-and-addressing-environmental-liabilities> (last visited June 23, 2019) (“PSD permits are expensive to obtain and require Best Available Control Technology for each regulated air pollutant emitted by the source.”).

70. See, e.g., ILL. COMP. STAT. 5/3-5018 (2017) (setting deed recording fees at very low levels); N.Y. REAL PROP. LAW § 432 (McKinney 2014) (same).

71. For a small sampling of this literature, see generally Richard A. Epstein, *The Supreme Court Tackles Patent Reform: A Series of Articles Examining Oil States Energy Services, LLC v. Greene’s Energy Group, LLC*, 19 FEDERALIST SOC’Y REV. 124 (2018) (discussing the existing adjudicatory

it—on Article III and Seventh Amendment grounds—that was recently resolved by the Supreme Court in *Oil States*.<sup>72</sup> As I mentioned above, the issue in that case, as in all challenges brought on similar grounds, was whether patents were “public rights” or “private rights.”<sup>73</sup> That is, are they creatures of statute, or are they common law rights that predate and exist separately from legislation by Congress? This is not quite identical to asking whether patents are property rights or regulatory licenses, but the overlap, as explained above, is quite substantial. For present purposes, however, the most important feature of this case is that the Court’s analysis was almost entirely formalistic. In the Court’s Article III doctrine, the question of what form patents take precedes and determines the question of how those patents may then be administered. The briefing in *Oil States*, and the Court’s decision, speak in the language of history and form.<sup>74</sup>

From a functionalist perspective, however, the case for allowing IPRs is straightforward. If patents are regulatory instruments, to be granted by the PTO when doing so would further social welfare, then the agency should equally have a procedure for rescinding those instruments when it appears they were improvidently granted. It makes no sense for the PTO—and all of the relevant stakeholders—to be locked into a patent once it is granted, able to overturn that patent only through a costly and lengthy court proceeding. Administrative adjudication is quicker and cheaper, and administrative law judges (“ALJs”), like patent judges, can develop expertise in their area of

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processes that have and should continue to be used to resolve patent disputes in court); Matthew J. Rizzolo & Kathryn C. Thornton, *The Taking of Business Method Patents?*, 25 RICH. J.L. & TECH. 1 (2018) (discussing whether patent owners who have had patents cancelled by the PTO can make a claim for compensation under the takings clause); Mark Magas, *Consequences for Patent Owners if a Patent is Unconstitutionally Invalidated by the Patent Trial and Appeal Board*, 94 CHI.-KENT L. REV. 79 (2019) (discussing the consequences of changes Congress made to allow administrative challenges to patents within the PTO).

72. *Oil States Energy Servs., LLC v. Greene’s Energy Grp., LLC*, 138 S. Ct. 1365, 1378–79 (2018). The Court upheld the constitutionality of IPR. *Id.*

73. *Id.* at 1373.

74. *Id.* (“In other words, the public-rights doctrine applies to matters arising between the government and others, which from their nature do not require judicial determination and yet are susceptible of it. Inter partes review involves one such matter: reconsideration of the Government’s decision to grant a public franchise.” (internal quotation marks omitted) (internal citation omitted)); Brief for the Federal Respondent at 11, *Oil States*, 138 S. Ct. 1365 (No. 16-712), 2017 WL 4805230, at \*11 (“The fact that Congress specified that patents ‘shall have the attributes of personal property,’ subject to other provisions of the Patent Act, 35 U.S.C. 261, does not prevent Executive Branch officials from rescinding an earlier patent grant, subject to judicial review. Executive Branch (and other non-Article III) officials often take actions that cause the divestiture of private property rights. The justifications for that approach are particularly strong with respect to inter partes review, since the relevant property interests are entirely defined by Congress, and the agency that is authorized to cancel invalid patents is the same one that made the initial patent grant.”); Brief for Respondent Greene’s Energy Grp., LLC at 44, *Oil States*, 138 S. Ct. 1365 (No. 16-712), 2017 WL 4805231, at \*44 (“In the Sixteenth-Eighteenth Centuries in England, patents were royal grants of privilege, not common law rights, and originally, the Crown could grant patents for invention as well as royal prerogatives for goods or businesses.”).

administration that far outstrips what a generalist federal judge can achieve.<sup>75</sup> It is for this reason that similar administrative proceedings are common throughout the administrative state. From ALJs who administer social security cases or adjudicate environmental disputes, to tax courts or immigration courts, administrative adjudication is a staple of the modern bureaucracy.

IPR has in fact achieved many of the objectives that a functionalist policymaker would have envisioned for it: It has allowed the PTO, with the help of outside parties, to invalidate scores of wrongly issued patents in less time and at lesser expense than would have otherwise been possible.<sup>76</sup> Not every decision the agency has made has been correct, to be sure, but the overall impact of the process has been positive.

Someone who viewed patents as property rights would have quite a different perspective, of course.<sup>77</sup> Property rights are meant to be nearly inviolable—that is the source of their strength and of the benefits they generate in encouraging investment and reliance. That is why property rights have traditionally been justiciable only in state and federal court. If patents were like any other type of property, the specter of an administrative body, rather than a court, cancelling scores of rights would naturally seem beyond the pale. It is thus easy to understand why IPR has generated such strong feelings on both sides, and why *Oil States* reached the Supreme Court.

#### D. IPR PANEL STACKING

In most administrative agencies, the agency head is explicitly given the authority to overrule a decision made by an administrative tribunal (composed of ALJs) within the agency.<sup>78</sup> This power is explicitly granted by the APA, which reserves to the agency head the same authority she would have if she were herself deciding the case as a matter of first impression.<sup>79</sup> Thus, suppose that an ALJ working for the Social Security Administration decides that an applicant is not eligible for Social Security Disability Insurance. If the

75. Diane Yandach, Note, *How Do We Keep Guns Out of the Hands of Those on the Terrorist Watch List Without Violating Due Process*, 15 RUTGERS J.L. & PUB. POL'Y 91, 122 (2017) ("Generally, administrative law judges are utilized when there is a need for special expertise." (citing PAUL R. VERKUIL ET AL., *THE FEDERAL ADMINISTRATIVE JUDICIARY* 773 (1992)). Patent judges are not technically ALJs, but they operate in essentially the same manner.

76. See Jason Rantanen, *Inter Partes Review Statistics*, PATENTLY-O (July 28, 2016), <https://patentlyo.com/patent/2016/07/partes-review-statistics.html>.

77. See sources cited *supra* note 13.

78. Roderick M. Hills, *Trump's Order on Administrative Law Judges: Perhaps Insidious, Probably Harmless*, JUST SEC. (July 25, 2018), <https://www.justsecurity.org/59709/trumps-order-administrative-law-judges-insidious-harmless>.

79. 5 U.S.C. § 557(b) (2012) ("On appeal from or review of the initial decision, the agency has all the power which it would have in making the initial decision except as it may limit the issues on notice or by rule.").

Administrator (the head of the agency) disagrees, she can simply reverse the ALJ's finding.<sup>80</sup>

This arrangement might initially strike some readers as odd or perverse. The notion of an executive-branch actor unilaterally reversing a quasi-judicial decision is an uncomfortable one for scholars steeped in standard American separation-of-powers law. However, the decision makes a great deal more sense once one begins to think of an agency as a unitary entity that possesses policymaking authority.<sup>81</sup> From that perspective, any decision that flows from the agency—be it the issuance of a permit to pollute, the providing of Social Security benefits, or a determination that a securities filing is permissible—represents a policy determination on the part of the agency. The head of the agency is, in most cases, the proper final authority on those policy determinations, both as a matter of law and as a matter of sound institutional design.

To be sure, the agency head cannot behave in a lawless fashion. The agency's decisions—whether made by the head of the agency, an ALJ, or anyone else—cannot contradict anything set forth in the agency's organic statutes. These decisions are also appealable and reviewable by federal courts.

This brings us to the PTO and IPRs. The PTO Director does not have the authority to directly overrule the findings of a PTAB panel in the course of an IPR. But the PTO Director does have the authority to designate members of a panel,<sup>82</sup> and to require that a panel rehear a particular issue once these additional members have been added.<sup>83</sup> In essence, then, the Director of the PTO has the authority to determine the outcome of a given PTAB case by stacking the panel with patent judges whom the director knows will rule in the direction the director wishes. In a sense, this represents an alternative to direct authority to overrule a panel's decision.<sup>84</sup> The Director is able to set PTO policy, not by directly announcing it, but by delegating to subordinates who will effectuate the director's will. IPR panel stacking thus sits at the intersection of the agency's authority to make substantive rules<sup>85</sup> and its authority to use IPR proceedings.<sup>86</sup>

Though the practice of PTO panel stacking has thus far rarely been employed, its very existence has managed to generate a great deal of

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80. Christopher J. Walker & Melissa F. Wasserman, *The New World of Agency Adjudication*, 107 CALIF. L. REV. 141, 144 (2019).

81. *See id.*

82. 35 U.S.C. § 6(c) ("Each . . . post-grant review, and inter partes review shall be heard by at least 3 members of the Patent Trial and Appeal Board, who shall be designated by the Director.").

83. *See id.*

84. *See generally* Walker & Wasserman, *supra* note 80 (describing how in many other agencies, the agency head has the power to unilaterally overrule agency adjudicatory boards and set agency policy).

85. *See supra* Section III.A.

86. *See supra* Section III.C.

controversy.<sup>87</sup> That should come as no surprise. If one is used to an American separation-of-powers model, the notion that an executive actor can determine which judges hear a particular case will appear jarring. For that matter, it would seem axiomatic that a patent holder whose patent is at risk would be entitled to a hearing before a neutral adjudicatory body, not one that has been hand-picked by the head of the PTO to reach a particular outcome. Certainly it would strike most readers as preposterous if the head of the PTO proposed that she should be allowed to choose which Federal Circuit judges heard a particular appeal.

These concerns have manifested themselves legally as an argument that panel stacking violates due process. Patents are indeed a type of property for purposes of the due process clause, and that protection naturally extends to any quasi-judicial post-grant proceeding such as IPR.<sup>88</sup> But to say that patents can only be cancelled pursuant to due process is to beg the question. The issue is not whether due process is required, but what sort of process is actually “due.”

If this were a true judicial proceeding, before Article III judges, due process would undoubtedly require that the executive not stack the panel to achieve her desired outcome.<sup>89</sup> But that is what comes from thinking of patents as property, the sort of rights that can only be changed or abridged through standard judicial processes in front of Article III judges. What if, instead, we (correctly) understand patents as regulatory licenses?

Properly viewing patents as regulatory licenses substantially changes the equation. First, from functional first principles, each patent grant by the PTO is a regulatory determination that allowing the applicant to have a patent will produce greater social good than harm.<sup>90</sup> In some cases, however, the agency

87. Nicholas Pfeifer, *Patent Office Admits to Stacking Judges to Manipulate IPR Decisions*, SMITH & HOPEN (Aug. 29, 2017), [https://www.smithhopen.com/news\\_detail/670/Patent-Office-Admits-to-Stacking-Judges-to-Manipulate-IPR-Decisions](https://www.smithhopen.com/news_detail/670/Patent-Office-Admits-to-Stacking-Judges-to-Manipulate-IPR-Decisions); Gene Quinn, *PTAB Phantom Expanded Panels Erode Public Confidence and Essential Fairness*, IPWATCHDOG (Mar. 22, 2018), <http://www.ipwatchdog.com/2018/03/22/ptab-phantom-expanded-panels/id=95151>.

88. *Patlex Corp. v. Mossinghoff*, 758 F.2d 594, 597–99 (Fed. Cir. 1985) (noting that “[i]t is beyond reasonable debate that patents are property” protected by the Fifth Amendment’s Due Process Clause). This result was arrived at via largely formalist doctrine governing the due process clause. Rather than quibble with that result, however, I will treat the due process clause’s application to patents as given and focus instead on what that clause might require.

89. It is worth noting that chief judges of districts and circuits can, at their discretion, permit judges from other courts to sit by designation on panels, thus potentially affecting the outcome of cases. In addition, there is evidence that panel assignments in the circuit courts are not fully random. Adam S. Chilton & Marin K. Levy, *Challenging the Randomness of Panel Assignment in the Federal Courts of Appeals*, 101 CORNELL L. REV. 1, 36–48 (2015).

90. I do not necessarily mean that the agency has decided this at a retail level, on a patent-by-patent basis. Rather, the PTO has determined at the wholesale level that the application meets the generalized standards it has established for patentability, those standards being based on the goal of enhancing the social good. See generally Christopher Buccafusco & Jonathan S. Masur, *Intellectual Property Law and the Promotion of Welfare*, in 1 RESEARCH HANDBOOK ON THE ECONOMICS OF INTELLECTUAL PROPERTY LAW THEORY (Ben Depoorter & Peter Menell eds., 2018) (discussing

will determine that the patent was improvidently granted. As noted above, there is no reason that the agency should be locked into its original grant. The agency should have internal procedures that allow it to rescind the granted patent. Within the agency, there is no reason those procedures should necessarily be restricted to judges, with other agency policy-makers playing no role. It is the PTO as a whole that issues patents, and the PTO as a whole that has policy expertise over patents. The PTO as a whole should have authority to rescind patents. That authority naturally flows through the PTO Director. Providing the Director with explicit authority to reverse a PTAB panel, akin to the authority vested in other agency heads, would be the most expeditious way of accomplishing this objective. But permitting the Director to stack a PTAB panel in order to achieve what she considers to be the appropriate result is a reasonable second-best alternative.

Comparative perspective is instructive here as well. Courts do not consider it a violation of due process for the head of an agency to simply *overturn* a decision by an ALJ or administrative panel (in agencies where the head has such authority).<sup>91</sup> The administrative state has operated for decades with such arrangements, and courts have never questioned them. If flatly reversing a quasi-judicial agency decision is not a violation of due process, why would it be a violation of due process to establish a panel of judges who will accomplish the same end? The PTO Director's authority to stack panels is a lesser power to the authority exercised in other agencies where the agency head can control outcomes directly. If the greater power of direct control does not violate due process, the lesser power should not, either.

I hasten to add: This is normative analysis, not prediction. At least one judge of the Federal Circuit and one Justice of the Supreme Court have expressed concern about the practice of panel stacking.<sup>92</sup> It is easy to see why it provokes such a visceral reaction among scholars and observers.<sup>93</sup> Although the Supreme Court upheld the use of IPR generally in *Oil States*, and in so doing struck a blow for the regulatory licensing view of patents, it would not be surprising to see the Court curtail ancillary IPR practices it views as distasteful, such as this one. The PTO Director's authority to stack panels may not last long.

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how the general goal of increasing social welfare is translated into patent doctrine). That is, the PTO acts in a rule utilitarian fashion, not an act utilitarian fashion.

91. Walker & Wasserman, *supra* note 80, at 175–78.

92. *See id.* at 188; *see also* Transcript of Oral Argument at 46, *Oil States Energy Servs., LLC v. Greene's Energy Grp., LLC*, 138 S. Ct. 1365 (2018) (No. 16-712), [https://www.supremecourt.gov/oral\\_arguments/argument\\_transcripts/2017/16-712\\_7kh7.pdf](https://www.supremecourt.gov/oral_arguments/argument_transcripts/2017/16-712_7kh7.pdf) (recounting Chief Justice Roberts' statement: "Does it comport to due process to change the composition of the adjudicatory body halfway through the proceeding?").

93. One leading intellectual property scholar has referred to the practice as potentially legal but nonetheless "yucky." Conversation with Professor Melissa Wasserman, Univ. of Tex. Sch. of Law, Intellectual Property Scholars Conference (Aug. 2018).

Nonetheless, this only highlights the value of excavating the question of whether patents are best understood as property or as regulatory licenses. This understanding, once in place, illuminates a wide variety of subsidiary issues. The answers it provides can be counter-intuitive.

#### IV. CONCLUSION

Patent law has become riven by a wide and fundamental divide over the true nature of patents and how they should be administered. This divide has been thrust to the forefront of the field by a series of issues—both constitutional and policy-based—regarding which types of institutional arrangements can or should be used to govern patent law. Some courts and scholars see patents as property rights, akin to real or chattel property, and argue that patents can be administered only through the means by which property is traditionally administered. Other courts and scholars see patents as akin to regulatory licenses and have no qualms about deploying all of the powers and procedures of the administrative state in the service of governing the patent system. Debates over this issue have manifested themselves in both functionalist and formalist terms, the latter driven by overly formal Supreme Court doctrine.

This divide over the nature of patents encompasses and explains views about a wide spectrum of individual policy questions, such as whether the PTO should have substantive rulemaking authority; whether the PTO should be able to use fees and other policy levers to obtain substantive goals; whether quasi-judicial forums for invalidating patents (such as IPR) are constitutional; and whether the head of the PTO may stack IPR proceedings in order to obtain what she believes are the socially optimal results. Proponents of patents as regulatory licenses will answer in the affirmative to all of those questions. Proponents of patents as property will answer in the negative.

At the same time, the divide over how best to understand patents transcends disagreement over even this set of administrative questions. The property-regulatory schism over patents informs nearly every debate over patent law and policy, from patentable subject matter to the choice of available remedies. Believers in these two competing visions will, in many cases, have very different conceptions of how the system as a whole should be structured. Surfacing the deep structure of patent law debates will help clarify the issues and questions at stake. But it will not necessarily help resolve them.