
RESPONSE

ON ADDRESSING PATENT QUALITY

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In response to Dan L. Burk & Mark A. Lemley, *Fence Posts or Sign Posts? Rethinking Patent Claim Construction*, 157 U. PA. L. REV. 1743 (2009); F. Scott Kieff, *The Case for Preferring Patent-Validity Litigation Over Second-Window Review and Gold-Plated Patents: When One Size Doesn't Fit All, How Could Two Do the Trick?*, 157 U. PA. L. REV. 1937 (2009); R. Polk Wagner, *Understanding Patent-Quality Mechanisms*, 157 U. PA. L. REV. 2135 (2009).

INTRODUCTION

The articles by Dan Burk and Mark Lemley,¹ F. Scott Kieff,² and R. Polk Wagner³ for the Symposium on the Foundations of Intellectual Property Reform represent a very valuable collection of works from some of the most notable and influential patent scholars. The wide range of claims and arguments—from Burk and Lemley's vigorous call for a return to the use of central claiming (and central-claim interpretation), to Wagner's compelling demonstration that the incentives for patentees and the Patent Office to produce opaque patent disclosures with indeterminate claims are strong and probably very difficult to uproot, to Kieff's forceful argument that patent-quality concerns are best resolved well after examination by imposing fee-

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¹ Dan L. Burk & Mark A. Lemley, *Fence Posts or Sign Posts? Rethinking Patent Claim Construction*, 157 U. PA. L. REV. 1743 (2009).

² F. Scott Kieff, *The Case for Preferring Patent-Validity Litigation Over Second-Window Review and Gold-Plated Patents: When One Size Doesn't Fit All, How Could Two Do the Trick?*, 157 U. PA. L. REV. 1937 (2009).

³ R. Polk Wagner, *Understanding Patent-Quality Mechanisms*, 157 U. PA. L. REV. 2135 (2009).

and cost-shifting penalties on patent owners that assert low-quality patents (and on infringers that ignore patents when validity cannot legitimately be challenged)—provides an excellent sample of perspectives that helps to illuminate the broader scholarly debate about patents, patent quality, and patent-system reform. Everyone with an interest in these issues will find these articles to be welcome and idea-stimulating reads.

The task of responding in this format to three works so different in focus, viewpoint, and argument style presents something of a challenge. Faced with some choices, like the linear presentation of three miniresponses (one to each work), I am inspired to attempt to organize this Response around some of the issues in the broader scholarly debate about patents, patent quality, and patent-system reform that I think are put into relief by the present works. Given the limited amount of space available, and given that my approach requires providing some description of the claims and arguments of the various works in the context of the issues and future directions for work they raise, this Response will not include a synopsis of each work.

As a final point, the structure of this Response bends somewhat the claims and arguments of the authors to my own will in service of the issues I desire to raise. Integrating the works in this manner requires some degree of generalization and categorization and creates the risk that I might in some way miscategorize an author's point or argument. It is not my intent to do so. This Response is written with deep appreciation for the subject works, and I encourage the reader to perform her own thorough independent examination as a prescription to any errors I might make.

I. ARE LOW-QUALITY PATENTS A PROBLEM WORTH THE CANDLE?

Perhaps the most complete definition of patent quality is set forth in Professor Wagner's *Understanding Patent-Quality Mechanisms*: "Patent quality is the capacity of a granted patent to meet (or exceed) the statutory standards of patentability—most importantly, to be novel, nonobvious, and clearly and sufficiently described."⁴ It goes on to explain that "low quality" patents are those "granted for an invention that do[] not meet these standards."⁵

The potential problem of low-quality patents is that they increase uncertainty in the patent system. As Professor Wagner points out, un-

⁴ *Id.* at 2138.

⁵ *Id.*

certainty about patentability and validity, uncertainty about the scope of granted patents, and, ultimately, uncertainty about whether the valuable enforcement of a patent is possible can make business decisions involving patents difficult and costly.⁶

To provide some additional context, consider the following description of the patent system and patent litigation. By recent estimates, there are roughly 1.8 million patents in force in the United States.⁷ It is commonly believed that only a tiny fraction of these patents have any economic significance whatsoever. Of that tiny fraction, only a fraction produce disputes between firms, and even fewer ever involve the filing of a complaint. Of the rarified few that make it into a complaint (very roughly, 3000 in a given year⁸), only a fraction are the subject of a judicial decision on the merits (as a “high side” estimate, 0.2% of all issued patents⁹ or between 86 and 125 patents per year¹⁰); fewer still are appealed. Finally, in those cases where an appeal is taken and the appellate court is forced to render a decision, the trial court is affirmed over three-quarters of the time, which suggests some amount of certainty and predictability.¹¹

If one assumes that not all patents that end up in a complaint are low-quality patents (or even if one assumes all such patents are low quality), it quickly becomes clear that in comparison to the overall number of in-force patents, the number of litigated low-quality patents is tiny. That is not to say, of course, that low-quality patents can have no economic impact outside of litigation. The uncertainty presented by low-quality patents may work to misallocate economic rewards even in the absence of litigation and, therefore, make less perfect the already imperfect incentive mechanism that is the patent system.

⁶ *Id.* at 2140.

⁷ See WORLD INTELLECTUAL PROP. ORG., WORLD PATENT REPORT: A STATISTICAL REVIEW 23 (2008), available at http://www.wipo.int/export/sites/www/ipstats/en/statistics/patents/pdf/wipo_pub_931.pdf (reporting the number of U.S. patents in force in 2006).

⁸ See Posting by Dennis Crouch to Patently-O, Patent Litigation Statistics: Number of Patents Being Litigated, <http://www.patentlyo.com/patent/2008/03/patent-litigati.html> (Mar. 17, 2008). Professor Wagner reports that over roughly the last twenty years, there have been between approximately 1.4 and 2.4 patent-infringement suits filed per 1000 in-force patents. Wagner, *supra* note 3, at 2143 fig.1.

⁹ Mark A. Lemley, *Rational Ignorance at the Patent Office*, 95 NW. U. L. REV. 1495, 1501 & n.27 (2001).

¹⁰ *Id.* at 1501 & n.26.

¹¹ See Kimberly A. Moore, *Are District Court Judges Equipped to Resolve Patent Cases?*, 15 HARV. J.L. & TECH. 1, 17 & tbl.2 (2001) (reporting that the Federal Circuit affirmed seventy-eight percent of lower-court judgments on patent issues between 1983 and 1999).

I suspect that the professors, like many of those intimate with patents and the patent system, probably agree that it is better to have higher-quality patents than it is to have lower-quality ones. I suspect also, however, that many, including the professors, likely agree that there is a maximum patent quality that can be achieved, beyond which the pursuit of higher quality becomes inefficient.¹² This leads to a central question in the scholarly debate concerning patents: are low-quality patents a problem worth the candle? There is little dispute that low-quality patents exist to some extent. But is it worth doing anything to try to reduce their number?

The subject works of this Response can be read as providing three distinct answers to the question of whether low-quality patents are a problem worth doing anything about. As I explain in more detail below, *Understanding Patent-Quality Mechanisms* suggests the answer is “yes.” *The Case for Preferring Patent-Validity Litigation* suggests the answer is “probably not,” while *Fence Posts or Sign Posts?* suggests more emphatically that the answer is “no.”

Understanding Patent-Quality Mechanisms supports the argument for better patent quality by providing a compelling demonstration that the features defining low-quality patents are strongly encouraged by the facts of patent examination and litigation. Using an analysis that is a mix of the empirical and the conceptual, *Understanding Patent-Quality Mechanisms* thoroughly and dispassionately identifies and examines the incentives that patent applicants and the Patent Office have to draft and issue, respectively, large quantities of patents with opaque disclosures and indeterminate claims.¹³ It quite convincingly shows how strong and deeply entrenched these incentives are and how difficult it will be to adjust the incentives that give rise to low-quality patents, at least in any substantial way, at a reasonable cost.¹⁴ By so clearly undressing the incentive structure that gives rise to low-quality patents, *Understanding Patent-Quality Mechanisms* suggests, at least implicitly, that low-quality patents are very likely a significant systemic problem, even when such patents are not litigated.

The Case for Preferring Patent-Validity Litigation suggests the position that we need not be too concerned with low-quality patents because they are, generally speaking, without value; their assertion in litigation

¹² See, e.g., Wagner, *supra* note 3, at 2139 (“Reaching a state of affairs where every granted patent meets or exceeds the standards of patentability seems both implausible and likely a misallocation of resources.”).

¹³ *Id.* at 2145-58.

¹⁴ *Id.* at 2163-65.

is a frivolous exercise.¹⁵ To the extent they harm the patent system, they do so because they make possible costly lawsuits that decrease the efficiency of the patent system's incentive structure. From this perspective, *The Case for Preferring Patent-Validity Litigation* considers whether administrative- or litigation-based decisionmaking reforms are more suitable for protecting the patent system. The analysis finds administrative-based reforms badly wanting, chiefly because they do not adequately account for the transaction costs involved and because they do not adequately account for public-choice problems that have been amplified by recent decisions of the Supreme Court and the Federal Circuit.¹⁶ The article finishes by arguing that the most pragmatic solution to any putative low-quality-patent problem is found mostly in the general law of civil litigation,¹⁷ particularly in the rules associated with fee and cost shifting used to discourage frivolous lawsuits.¹⁸

If *The Case for Preferring Patent-Validity Litigation* can be read as suggesting that low-quality patents are probably not a problem worth the candle, *Fence Posts or Sign Posts?* can be read as suggesting much more emphatically that they are not. Indeed, the latter seems to go farther, suggesting by its argument that there may be very few low-quality patents (by Professor Wagner's definition); there is just low-quality law used to define the scope of the invention disclosed in a patent. In other words, many patent applicants may make disclosures that clearly show patentable invention; the real problem is that the law of patent interpretation is so distorted that it has become incapable of accurately locating the scope of the exclusive right.¹⁹

Fence Posts or Sign Posts? appears to join this argument with one implied from the presentation of patent-system information earlier in this Response²⁰ and expressly presented by Professor Lemley in his earlier, well-known piece *Rational Ignorance at the Patent Office*, specifically: "[S]o few patents are ever asserted against a competitor, it is much cheaper for society to make detailed validity determinations in those few cases than to invest additional resources examining patents that will never be heard from again."²¹

¹⁵ Kieff, *supra* note 2.

¹⁶ *Id.* at 1947-50, 1960-61.

¹⁷ Kieff also advocates "dial[ing] down the presumption of validity." *Id.* at 1940.

¹⁸ *Id.* at 1946, 1963.

¹⁹ See Burk & Lemley, *supra* note 1, at 1751-61 (describing the difficulties of claim-construction under the current peripheral-claiming regime).

²⁰ See *supra* text accompanying notes 4-10.

²¹ Lemley, *supra* note 9, at 1497.

Taken together, these arguments suggest that low-quality patents are almost no problem at all. They are rarely litigated, and when they are, all courts have to do is properly locate the “core” or “gist” of the invention and properly define the scope of the exclusive right from that understanding. The problem of low-quality patents should largely fall away if such patents are assigned their proper scope—which I sense Professors Burk and Lemley believe will usually be narrower than the “improper” scope given by the current law.

Although these works reveal some different conclusions about whether low-quality patents present a substantial problem, they also suggest some agreement on two important aspects of patent law and policy. First, each work expresses a central idea about the current patent system: that the incentive structure of the patent system can be made more efficient. Professor Kieff finds that efficiency in the better application of the general law of civil litigation. Professors Burk and Lemley find efficiency gains in changes to the way the patent law defines the scope of a patentee’s exclusive right. Professor Wagner suggests efficiency gains may be best achieved by using many tools cooperatively, including administrative and patent law changes to diminish the incentives to defer clarity about claim scope in patent prosecution, changes in the patent law to weaken the presumption of validity, changes in the general law or in patent law to punish applicants who seek low-quality patents, and other incentives to diminish where possible the desire of patent applicants to seek large portfolios of low-quality patents.

Second, the works all suggest that the legislative proposals for patent reform that have been so ballyhooed over the last several years are not seriously directed to making any kind of real improvement to the patent system. Each work suggests a patent reform (or reforms) not prominently featured in any of the main legislative proposals to reform the patent system.²² Indeed, the works expressly and implicitly criticize some of the main features of the legislative proposals that have been promoted for the last several years.²³ Given the high quality

²² See Burk & Lemley, *supra* note 1, at 1746-48 (recommending central claiming); Kieff, *supra* note 2, at 1951-54 (advocating enhancing fee and cost shifting); Wagner, *supra* note 3, at 2166 (suggesting that “the USPTO . . . conduct much more thorough claim-construction analyses—perhaps even drafting an administrative opinion on claim scope”).

²³ See, e.g., Wagner, *supra* note 3, at 2163 (expressing skepticism that proposals such as “improving the administrative organization, altering the prosecution process, and abandoning the prosecution process . . . will make a substantial improvement in patent quality”).

of contributors, one can only question whether the legislative proposals that have been introduced have been crafted with the public's interest and benefit in mind.

The works suggest a number of directions for future research. Most blatantly, while they provide very considered views on the question, "Are low-quality patents a problem worth the candle?," they do not show consensus, thereby suggesting that there is more to learn before this basic question can be answered.²⁴

In addition, two of the works, *The Case for Preferring Patent-Validity Litigation* and *Fence Posts or Sign Posts?*, largely frame the measurement of patent-quality concerns from the perspective of litigation. This is an analytically valid means to be sure, but the uncertainty presented by low-quality patents may work to misallocate rewards even in the absence of litigation.²⁵ If this is a substantial problem in the patent system, its extent is not well known. Future work should seek to further examine and, if possible, quantify this problem.

Finally, the prescriptions suggested by these works are novel and are deserving of follow-on work by others in the academy that have an interest in patent law, property, and patent-system reform. If the prescriptions bear the weight of additional scrutiny, serious efforts should be made to bring them to the attention of the policymakers responsible for drafting patent-reform legislation. At a minimum, current and future patent-reform legislation should be better off with consideration of the teachings of these works.

II. WHAT IS THE INVENTION THE PATENT SYSTEM PROTECTS?

The subject works of this Response reveal two very different views about how a patent system might operationalize the exclusive rights that it promises. The distinct views are most revealed by *Fence Posts or Sign Posts?*, the core argument of which is that the patent system should seriously consider moving to a central-claiming regime to de-

²⁴ This is a question that has not, of course, gone unstudied. A recent work by Boston University Law School professors James Bessen and Michael Meurer shines some light on the question, answering it at least in part in the affirmative. See generally JAMES BESSEN & MICHAEL J. MEURER, *PATENT FAILURE: HOW JUDGES, BUREAUCRATS, AND LAWYERS PUT INNOVATORS AT RISK* (2008) (providing an empirically-based analysis of patent quality).

²⁵ It should also be pointed out that the prescriptions offered in these pieces should be expected to have a trickle-down effect on decisions to file both patent applications and patent lawsuits.

termine a patentee's exclusive right, abandoning the current use of peripheral claims for that purpose.²⁶

As described by the authors, the main difference between the two approaches is that central claiming seeks to found patentee rights in the "gist" or "core" of the patentee's inventive contribution.²⁷ The "gist" or "core" of a patentee's contribution is determined almost entirely from reading the written-description portion of the patent document.²⁸ In central claiming's basic form, any patents would at most contain only a single general claim that would be afforded little interpretive force.²⁹

Peripheral claiming (conventionally used in many utility patents) is much less concerned with giving to a patentee the full scope of the "gist" or "core" of an invention's contribution to society. Instead, peripheral claiming seeks to tether a patentee's exclusive right to the patentee's specific contribution of embodiments of the invention that have real-world practicability.³⁰ It measures the patentee's contribution of such embodiments by the content of the patent document, requiring a patentee, with words in the patent document, to particularly point out and distinctly claim the outer bounds (or "fence posts") of a species, or more often of a genus, of nonobvious embodiments having specifically described and enabled characteristics.³¹ Thus, rather than

²⁶ See Burk & Lemley, *supra* note 1, at 1747 ("Rather than relying on the illusion of peripheral fence posts, patent law may do better to once again look to central sign posts.").

²⁷ *Id.*

²⁸ *Id.* at 1784.

²⁹ *Id.* *Fence Posts or Sign Posts?* hedges its central claim by offering some intermediate steps between pure central claiming and peripheral claiming, in which claims may sometimes be permitted to play a greater interpretive role. See *id.* at 1795-99. In this short Response, I address only the article's central claim.

³⁰ This is the natural consequence of peripheral claiming in the context of the enablement, written description, and other disclosure requirements of 35 U.S.C. § 112 paras. 1-2 (2006). See also Jeanne C. Fromer, *Claiming Intellectual Property*, 76 U. CHI. L. REV. 719, 721 (2009) ("Patent law has adopted a system of peripheral claiming, requiring patentees to articulate their inventions' bounds by the time of the patent grant, usually by listing their necessary and sufficient characteristics. Peripheral claims in patent law are conventionally thought to give notice to the public of the extent of the set of protected embodiments so as to encourage efficient investment in innovation" (footnote omitted)). That the embodiments delimited by peripheral claims are supposed to have a nexus with real-world practicability is evident in the utility requirement of patent law, as well as in the subject matter requirement of patent law. See, e.g., *In re Fisher*, 421 F.3d 1365, 1371 (Fed. Cir. 2005) (requiring peripheral patent claims to define embodiments with specific real-world utility).

³¹ See Burk & Lemley, *supra* note 1, at 1749 ("The peripheral-claiming system seeks to define the outer boundaries of the invention. In theory, the process works as fol-

giving a patentee rights in the full scope of an inventive contribution, peripheral claiming is directed to giving a patentee something less.

The arguments made in favor of central claiming in *Fence Posts or Sign Posts?* are manifold but can be somewhat generally dichotomized: First, the article provides an emphatic critique of the interpretation of peripheral claims.³² Second, the article favorably assesses the comparative costs and benefits of central claiming using a description of its past and current use, and making predictions about the impact of implementing central claiming in the United States.³³

As is normal with the writings of Professors Burk and Lemley, the arguments in *Fence Posts or Sign Posts?* are well written and forcefully presented. But there are some reasons to be cautious in accepting the article's conclusion hook, line, and sinker (a caution *Fence Posts or Sign Posts?* also emphasizes³⁴). Perhaps the most persuasive argument to read—the criticism of peripheral-claim interpretation—relies very heavily on descriptions and inferences from a set of patents that represent at most only the smallest sliver of in-force patents.³⁵ Thus, however warranted the individual critiques are, it is less clear that the examples upon which they are based fully support the conclusion that there is a systemic problem. The second part of the argument, parts of which I comment on below, is by its own terms more ambivalent about the merits of central claiming.³⁶

An initial question presented by *Fence Posts or Sign Posts?* is whether shifting patent-scope analysis from claims informed by written descriptions to written descriptions alone presents much of a real difference in how patent scope is legally defined. It is quite possible that it may not. Words are, as *Fence Posts or Sign Posts?* vigorously argues, imperfect means for defining the scope of property rights. As long as the patent system has to rely on the patent document to determine the scope of the right to exclude, however, getting rid of the words of pa-

lows: The applicant and the PTO examiner negotiate over the scope of the invention, limiting it in view of the prior art and the range of examples that the applicant has enabled.”).

³² See *id.* at 1748-65.

³³ See *id.* at 1765-95.

³⁴ See *id.* at 1747 (“Indeed, we are not ourselves fully persuaded that the benefits of central claiming outweigh the costs.”).

³⁵ See Lemley, *supra* note 9, at 1501 (noting that “less than two-tenths of one percent of all issued patents actually go to court”). Moreover, of those patent decisions that get appealed, over two-thirds are affirmed. See Moore, *supra* note 11, at 11.

³⁶ See *supra* note 34 and accompanying text.

tent claims does little more than substitute the words of other portions of the patent document.³⁷

Patent attorneys already draft written descriptions with strategic goals in mind. And even if patent attorneys are currently (because of claims, perhaps) less strategic in the words they use to draft descriptions, they seem an irritable enough bunch to adapt their word-selection strategies to that environment. To tie in one of the other articles, it seems likely that if the incentives of patent applicants are to make opaque disclosures with indeterminate descriptions of the specifics of an invention,³⁸ patent applicants can do so equally well, if not better, in the absence of claims.

Importantly, because the overall effect of claim derogation is to reduce the amount of information about the invention associated with the patent, claim derogation may have a deleterious effect on patent disclosures. With claims, patent applicants can describe and enable exemplary embodiments with some clarity, being confident that they can use claims to define somewhat more abstractly the characteristics of those embodiments that they hope to include within their exclusive right. Without claims, patent applicants may attempt to be much less clear in their disclosures for fear that specificity will narrow their rights to the point of uselessness.

Another question presented by moving to a central-claiming regime is what effect such a move will have on the incentive structure of the patent system. At this point, whether it would have an overall adverse impact or not is pure speculation. Somewhat more specifically, however, there are reasons to be concerned that a move to central claiming might substantially adjust the system's costs and benefits.

Fence Posts or Sign Posts? contends that central claiming may reduce the cost of patent prosecution.³⁹ This might be true, although there are reasons to think that the expectations might not be so clear. To begin with, patent examiners rarely expressly construe claims,⁴⁰ which suggests that there may not be much cost savings to be had by taking them out of patent applications. In addition, claim amendments pro-

³⁷ This argument assumes that the words of a patent claim are dominant. This assumption might be questionable given the controlling case law of *Phillips*, which seems to be somewhat consonant with *Fence Posts or Sign Posts?*'s more intermediate positions. See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1311-19 (Fed. Cir. 2005) (en banc) (emphasizing a holistic approach to patent-scope interpretation).

³⁸ See Wagner, *supra* note 3, at 2147-51.

³⁹ Burk & Lemley, *supra* note 1, at 1786-87.

⁴⁰ See Lee Petherbridge, *Positive Examination*, 46 IDEA 173, 198 (2006).

vide an outlet, a means of compromise, that permits allowance when patent applicants and examiners are locked in disagreement. Without access to amendments, the ability to save costs by compromising is lost; examiners might allow patents they would have preferred not to for the benefit of a productivity credit; parties might be forced to file continuations and appeals for applications that clearly have patentable subject matter. In short, if the patent system were to move to central claiming, the costs of patent acquisition could decrease as *Fence Posts or Sign Posts?* suggests, but it is also possible that costs might increase substantially.

A nearly opposite cost concern is that the Patent Office might respond to a central-claiming regime by allowing most applications to issue as patents; the theory is that, if necessary, courts will determine the accurate scope and separate the patentable from the unpatentable at a later time. This registration-style approach to patent allowance could reduce the cost of patent prosecution (consonant with the argument of *Fence Posts or Sign Posts?*), but it could also encourage a tidal wave of patents. Cheaper prosecution and greater uncertainty about the probability of the valuable enforcement of a patent might incentivize parties to file even more patent applications than they do now. The onslaught of patents could increase even further the transaction costs of the patent system, which in turn could reduce the system's ability to encourage innovation.

Another systemic cost that might be affected is the cost of patent litigation. *Fence Posts or Sign Posts?* acknowledges that one possible expectation of central claiming is an increase in patent litigation.⁴¹ However, it suggests that the litigation that does result might be of a more desirable type and does not appear to contemplate a substantial and harmful increase in patent litigation.⁴² This prediction might be right, but if, for some of the reasons just suggested, central claiming produces many more patents and substantially more litigation, it could impose a substantial blow to the incentive structure of the patent system.

Another cost that might be affected by a move to central claiming is framed nicely by Professor Wagner's description of the patent system in *Understanding Patent-Quality Mechanisms*. A basic premise of the patent system is that "propertizing" inventions will "stimulate behaviors that will enable the market to better support innovation."⁴³ One

⁴¹ Burk & Lemley, *supra* note 1, at 1791.

⁴² *See id.* at 1791-95.

⁴³ *See* Wagner, *supra* note 3, at 2140; *cf.* Kieff, *supra* note 2, at 1940-41 (expressing

way in which patents are believed to perform this role is by providing enough information about their attendant rights that parties can negotiate and transact around patents.⁴⁴ As in the case of litigation, *Fence Posts or Sign Posts?* appears to make the concession that patents with claims that are interpreted provide modestly better ex ante information about the legal scope of the patent rights than patents without claims.⁴⁵ If this is so, a move to central claiming has the potential to disrupt—by making more costly—the organizing role that patents play in innovation.

The dichotomy of claim interpretation presented in *Fence Posts or Sign Posts?* is fascinating, and its authors should be complimented for presenting it. It also suggests a number of avenues for future work. For example, as *Fence Posts or Sign Posts?* observes, central claiming is still quite prominent in the U.S. patent system.⁴⁶ Claims drafted in § 112, paragraph 6 format are given a central-claim interpretation. Cases involving § 112, paragraph 6 central claims could be compared to cases involving more conventional peripheral claims to determine whether the analyses or outcomes of cases involving central claims are, in some way, better. Future work might additionally examine the impact of central claiming on the quality of disclosures, on other incentives that are normally considered to attend the patent system, and on the cost of patent justice.

III. WHAT IS THE ECONOMIC FUNCTION OF PATENTS, AND SHOULD WE HAVE OUR CURRENT PATENT SYSTEM?

What is the economic function of patents, and should we have our current patent system? None of the works makes any real inroads on these seminal questions, which, while often unspoken, shape and influence much of patent scholarship. To be fair, none of them tries expressly to do so. But I do not think the inferences too attenuated to suggest that the works do reflect different beliefs about the answers to these questions.

concern for “the ways that property rights in intangible assets can be structured so as to improve economic development, innovation, and competition by encouraging private actors to interact and strike deals with each other”).

⁴⁴ See F. SCOTT KIEFF ET AL., *PRINCIPLES OF PATENT LAW: CASES AND MATERIALS* 68-70 (4th ed. 2008).

⁴⁵ See Burk & Lemley, *supra* note 1, at 1791.

⁴⁶ *Id.* at 1771-77.

As a preliminary matter, none of the works speaks in absolutes. All admit that the answers to these questions come in shades of gray, depending on both context and perspective. None, I think, suggests that the patent system is perfectly efficient—in fact, all indicate the contrary—and none of the authors, I think, would argue that patents have never encouraged any innovative activity. But I nonetheless think that the works reflect a divide over how the patent system works and how optimistic we should be over its potential.

Fence Posts or Sign Posts? suggests that the patent system can really only be made to work where patent rights are determined very late in the game. The dominant expectation appears to be costly litigation where the enforcement of any patent is subjected to a sensitive policy analysis through which an inventor's adequate incentive is specifically, judicially crafted.

The article also suggests a belief that business should be more insulated from the effect of patents than it currently is because one incentive its reforms might promote is the incentive for competitors to take the risk of infringement, secure in the idea that courts will interpret patents so as to avoid finding infringement. And should they guess wrong, the most they should normally expect is for a court to move some money around the table in the future.

In contrast to the highly customized patent justice reflected in *Fence Posts or Sign Posts?*, the other works appear to reflect the belief (or, at a minimum, the aspiration) that patent rights can be determined earlier in the game, without judicial assistance. This view acknowledges that expensive litigation will happen—that it is inevitable when the stakes are high enough—but it nonetheless expresses the expectation of a more generally predictable patent justice within which some litigation can be deterred and within which patents can be used to shape and support innovation with less judicial intervention.

The divide in many respects reflects the ancient question of whether the patent system generally works to encourage innovation. If the view suggested by *Fence Posts or Sign Posts?*—that the patent system can only be a predominantly ex post system, with incentive rewards based on unknowable rights and distributed typically by judges after expensive litigation—is correct, then the patent system might not work very well. On the other hand, if the view suggested by *Understanding Patent-Quality Mechanisms* and by *The Case for Preferring Patent-Validity Litigation*—that patents should and can be used by markets to efficiently encourage innovation—is correct, then the patent system may work reasonably well, and, in any event, improvement is possible.

The future directions for research in this area are clearly implied by the foregoing discussion.

CONCLUSION

Taken together, these works by Burk and Lemley, Kieff, and Wagner are illuminating and well written, and they provide an excellent sample of perspectives on the broader scholarly debate about patents, patent quality, and patent-system reform. And while I wish I had more room to discuss the issues and topics highlighted by these collected works, since I do not, I hope you will take the time to read them yourselves.

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