

**CONSTRUING PATENT CLAIMS ACCORDING TO THEIR
“INTERPRETIVE COMMUNITY”:
A CALL FOR AN ATTORNEY-PLUS-ARTISAN PERSPECTIVE**

*John M. Golden**

TABLE OF CONTENTS

I. INTRODUCTION.....	322
II. ARGUMENT FOR AN AUDIENCE-ORIENTED PERSPECTIVE.....	329
III. THE ORDINARY ARTISAN RULE IN LAW, HISTORY, AND PRACTICE.....	333
<i>A. Implicit Recognition of a Non-Artisan Audience for Patent Claims.....</i>	<i>334</i>
1. Courts’ Actual Claim Construction Methodology.....	335
2. Gillette’s Razor: An Illustration of Claim Construction in Action	341
<i>B. The Origins of Patent Law’s “Person of Ordinary Skill” Measure</i>	<i>345</i>
<i>C. A Short History of Claims and Claim Construction.....</i>	<i>348</i>
1. The Slow Evolution of Modern Claims and Claim Interpretation.....	348
2. Historical Alternatives to the Artisan Perspective.....	363
IV. ELIMINATING THE DISJUNCTION BETWEEN STATED RULE AND PRACTICE	368
<i>A. Problems with an Ordinary Artisan Perspective</i>	<i>368</i>
<i>B. Undesirability of the Disjunction Between Rule and Practice.....</i>	<i>376</i>
<i>C. A Hybrid Alternative to the Ordinary Artisan Rule</i>	<i>378</i>
V. CONCLUSION.....	385

* Assistant Professor, University of Texas School of Law. For helpful comments and discussions, I thank Oren Bracha, William Fisher, Mark Gergen, Daniel Halperin, Scott Hemphill, Timothy Holbrook, James Lampert, Thomas Lee, Jeffrey Lefstin, Mark Lemley, Michael Meurer, Larry Sager, Greg Vetter, participants in the Intellectual Property and Communications Law Scholars Workshop at Michigan State University, and the editors of the *Harvard Journal of Law & Technology*.

THE CONSTRUCTION OF WRITTEN INSTRUMENTS IS ONE OF THOSE THINGS THAT JUDGES OFTEN DO AND ARE LIKELY TO DO BETTER THAN JURORS UNBURDENED BY TRAINING IN EXEGESIS. PATENT CONSTRUCTION IN PARTICULAR "IS A SPECIAL OCCUPATION, REQUIRING, LIKE ALL OTHERS, SPECIAL TRAINING AND PRACTICE."

— MARKMAN V. WESTVIEW INSTRUMENTS, INC. (SOUTER, J.)¹

I. INTRODUCTION

Determination of the scope of a patented invention is one of the most contentious and difficult tasks of modern patent law. Claims — numbered clauses at the end of a patent — are meant to provide notice of what a patent covers and to describe a patented invention in a way that distinguishes it from prior art.² Because of claims' centrality to determinations of patent scope and patent validity, the stakes in trying to improve the predictability of claim construction are large.

Patents play a critical role in modern business planning and finance.³ Moreover, as with other types of intellectual property, the importance of patents appears to be increasing:⁴ recently, the number of United States patents issued each year has grown faster than the real gross domestic product.⁵ The pace and breadth of modern patenting has fed concerns that overlapping or fragmented patent rights may act to retard innovation rather than "promote . . . Progress."⁶

1. 517 U.S. 370, 388 (1996) (quoting *Parker v. Hulme*, 18 F. Cas. 1138, 1140 (C.C. Pa. 1849)).

2. See *In re Warmerdam*, 33 F.3d 1354, 1360 (Fed. Cir. 1994); see also *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc) ("It is a 'bedrock principle' of patent law that 'the claims of a patent define the invention to which the patentee is entitled the right to exclude.'" (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004))).

3. See, e.g., FTC, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY ch. 3, at 1–3, 9–11 & n.48, 17–20 (2003) [hereinafter FTC REPORT] (noting predictions that "the absence of patents would eliminate" or more than halve "innovation in the pharmaceutical industry"); Henry G. Grabowski, *Patents and New Product Development in the Pharmaceutical and Biotechnology Industries*, in SCIENCE AND CENTS: EXPLORING THE ECONOMICS OF BIOTECHNOLOGY 87, 88–92, 99–101 (John V. Duca & Mine K. Yücel eds., 2003) (proceedings of the 2002 Conference on Exploring the Economics of Biotechnology) (on file with the *Harvard Journal of Law & Technology*) ("Based on a survey of U.K. R&D managers, [two British economists] estimated that pharmaceutical R&D expenditures would be reduced by 64 percent in the absence of patent protections.").

4. See Jay P. Kesan & Thomas S. Ulen, *Foreword: Intellectual Property Challenges in the Next Century*, 2001 U. ILL. L. REV. 57, 58 n.4 (2001) ("In the last two decades, the portion of businesses' worth attributable to intellectual assets has quadrupled from roughly one-sixth to more than two-thirds."); cf. Gregg S. Sharp, *A Layman's Guide to Intellectual Property in Defense Contracts*, 33 PUB. CONT. L.J. 99, 103–04 (2003).

5. See John M. Golden, "Patent Trolls" and Patent Remedies, 85 TEX. L. REV. 2111, 2111 n.3 (2007).

6. U.S. CONST. art. I, § 8, cl. 8 (giving Congress the power "[t]o promote the Progress of Science and useful Arts" through grants of patents); see, e.g., Michael A. Heller & Rebecca

The certainty with which patent scope is defined is a crucial variable in determining whether the net impact of patents is positive or negative. Relative certainty regarding a patent's scope can promote the development and dissemination of related technology by providing a sense of security both to investors in patent rights and to investors in activities that might be vulnerable to charges of patent infringement.⁷ Greater certainty may also facilitate licensing that promotes efficient levels of inventive and productive activity.⁸ Parties may be more likely to avoid expensive litigation and agree to licensing terms if they can first agree on a patent's scope.⁹ Further, probable correlates of certainty — such as the coherence of claim construction law and the predictability of courts' constructions — are likely to make processes of construing claims, forecasting court constructions, and drafting claims that adequately cover an invention less taxing and less error-prone.

Several developments of the last few decades were intended to bring greater predictability and rationality to claim construction. In 1982, Congress created the United States Court of Appeals for the Federal Circuit, a new appellate court with exclusive jurisdiction over appeals in cases that arise under federal patent law.¹⁰ In 1996, the Su-

S. Eisenberg, *Can Patents Deter Innovation? The Anticommons in Biomedical Research*, 280 *SCIENCE* 698, 698 (1998) (“A proliferation of intellectual property rights upstream may be stifling life-saving innovations further downstream in the course of research and product development.”).

7. See *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 732 (2002) (“If competitors cannot be certain about a patent's extent, they may be deterred from engaging in legitimate manufactures outside its limits, or they may invest by mistake in competing products that the patent secures.”); FTC REPORT, *supra* note 3, ch. 5, at 3–4 (listing negative “impacts of uncertainty”); Craig Allen Nard, *A Theory of Claim Interpretation*, 14 *HARV. J.L. & TECH.* 1, 7 (2000) (noting that “a patent claim having seemingly migratory borders” might discourage “future innovation”). See generally Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 *COLUM. L. REV.* 839, 839, 908–16 (1990) (concluding that “[w]hen a broad patent is granted or expanded via the doctrine of equivalents, its scope diminishes incentives for others to stay in the invention game”).

8. Cf. A. MITCHELL POLINSKY, *AN INTRODUCTION TO LAW AND ECONOMICS* 12 (2d ed. 1989) (describing “the simple version of the Coase Theorem” as stating that “[i]f there are zero transaction costs, the efficient outcome will occur regardless of the choice of legal rule”); Joseph Scott Miller, *Enhancing Patent Disclosure for Faithful Claim Construction*, 9 *LEWIS & CLARK L. REV.* 177, 196 (2005) (“[I]t is well-accepted that clearer property boundaries promote efficiency by lowering the transaction costs associated with bargaining over rights.”).

9. See Robert P. Merges, *Intellectual Property Rights and the New Institutional Economics*, 53 *VAND. L. REV.* 1857, 1866 (2000); cf. Paul J. Heald, *A Transaction Costs Theory of Patent Law*, 66 *OHIO ST. L.J.* 473, 489 (2005) (arguing that the definition of inventions through patents can aid negotiations); Mark A. Lemley, *The Changing Meaning of Patent Claim Terms*, 104 *MICH. L. REV.* 101, 102 (2005) (“[O]nce the court construes the claims, most patent cases settle, and those that do not are often decided on summary judgment.”).

10. 28 U.S.C. § 1295(a)(1) (2000). See generally William M. Landes & Richard A. Posner, *An Empirical Analysis of the Patent Court*, 71 *U. CHI. L. REV.* 111, 111 (2004) (describing reasons for creating the Federal Circuit).

preme Court's opinion in *Markman v. Westview Instruments, Inc.*¹¹ affirmed the Federal Circuit's holding that claim construction is a task for judges rather than juries.¹² Two years later, the Federal Circuit held that claim construction is not only a judicial task, but also a purely legal one, the entirety of which is subject to de novo review.¹³ Thus, for about a decade, a single and relatively expert court of appeals has had the development of claim construction law firmly and clearly under its thumb.

Nonetheless, claim construction jurisprudence continues to bear hallmarks of unpredictability.¹⁴ Reversal rates of district court claim constructions stand at roughly 34%,¹⁵ and commentators have repeat-

11. 517 U.S. 370 (1996).

12. *Id.* at 372, 388 (“hold[ing] that the construction of a patent, including terms of art within its claim, is exclusively within the province of the court”).

13. *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1455–56 (Fed. Cir. 1998) (en banc).

14. Given that patent rights exist at the evolving edges of technology and, like contracts, effectively “regulate the future,” Richard A. Posner, *The Law and Economics of Contract Interpretation*, 83 TEX. L. REV. 1581, 1582 (2005), it is debatable whether demands for certainty in patent scope can ever be satisfied. *Cf.* H.L.A. HART, *THE CONCEPT OF LAW* 128 (Clarendon Press 2d ed. 1994) (1961) (“[U]ncertainty at the borderline is the price to be paid for the use of general classifying terms in any form of communication concerning matters of fact.”); Dan L. Burk & Mark A. Lemley, *Quantum Patent Mechanics*, 9 LEWIS & CLARK L. REV. 29, 52 (2005) (suggesting that “the whole search for a ‘plain’ or ‘ordinary’ or ‘settled’ meaning of patent claims is doomed to failure”); Paul M. Janicke, *On the Causes of Unpredictability of Federal Circuit Decisions in Patent Cases*, 3 NW. J. TECH. & INTEL. PROP. 93, 97 (2005) (asserting that the unpredictability of claim construction is, “to a large extent, an expected byproduct of a legal system that tries to express technical exclusivity with words”); David L. Schwartz, *Practice Makes Perfect? An Empirical Study of Claim Construction Reversal Rates in Patent Cases*, 107 MICH. L. REV. (forthcoming 2008) (manuscript at 40, available at <http://ssrn.com/abstract=1012949>) (“Claim construction may be inherently indeterminate.”).

15. Kimberly A. Moore, *Markman Eight Years Later: Is Claim Construction More Predictable?*, 9 LEWIS & CLARK L. REV. 231, 233, 239 (2005) (reporting a 34.5% reversal rate for claim constructions since the Supreme Court's 1996 *Markman* decision); *see also Cybor*, 138 F.3d at 1476 n.4 (Rader, J., dissenting) (citing figures showing a 38.3% reversal rate between April 5, 1995 and November 24, 1997). *But cf.* Jeffrey A. Lefstin, *Claim Construction, Appeal, and the Predictability of Interpretive Regimes*, 61 U. MIAMI L. REV. 1033, 1037–39 (2007) (questioning the probative value of many studies of reversal rates). Reversal rates in civil cases decided by other courts of appeals recently averaged about 12%. OFFICE OF JUDGES PROGRAMS, ADMIN. OFFICE OF THE U.S. COURTS, FEDERAL JUDICIAL CASELOAD STATISTICS 26 (2005), available at <http://www.uscourts.gov/caseload2005/contents.html>. Of course, the relatively high reversal rates for patent claim construction could be explained by litigants' greater selectivity in choosing which claim constructions to appeal, rather than any atypical failure on the part of courts. *See* Arti K. Rai, *Engaging Facts and Policy: A Multi-Institutional Approach to Patent System Reform*, 103 COLUM. L. REV. 1035, 1059 (2003) (“[S]election effect problems suggest that these statistics on claim construction reversals should be read cautiously.”); *cf.* PETER L. STRAUSS ET AL., GELLHORN AND BYSE'S ADMINISTRATIVE LAW 1046 (rev. 10th ed. 2003) (arguing that “rates of affirmance and reversal” may simply reflect “the discounted value of bringing actions”). The consensus, however, is that the causes of high claim construction reversal rates are not so benign. T.S. Ellis, III, *Letter from Judge Ellis*, 16 FED. CIR. B.J. 1, 1–2 (2006) (“[E]ven those who believe (as I do) that the problem is not so dire as to justify radical structural changes in the judiciary cannot doubt that there is a problem . . .”).

edly observed that different Federal Circuit judges favor different claim construction methodologies.¹⁶

The Federal Circuit has not been insensitive to these concerns. In 2005, its en banc opinion in *Phillips v. AWH Corp.*¹⁷ quashed an extreme, dictionary-driven approach to claim construction that some members of the court had championed.¹⁸ The approach rejected in *Phillips* had displayed a dismaying capacity to produce contextually implausible “plain meanings.” In *International Rectifier Corp. v. IXYS Corp.*,¹⁹ for example, the Federal Circuit held that a claim’s use of the term “polygonal” to describe regions in semiconductor devices required a physical impossibility. The court acknowledged that “one of ordinary skill in the art would understand from the written description that . . . diffusion . . . will naturally cause some blurring of the [regions’] corners and sides.”²⁰ But the court relied on a general-purpose dictionary’s definition of “polygon” to hold that the claim’s “regions” had to have the truly straight-edged and sharp-angled shape of geometric polygons.²¹ According to such a geometric definition, the rough-edged nature of Egypt’s Great Pyramids would mean that they are not “pyramidal”!

Aside from rejecting such extreme excursions in dictionary-driven literalism, however, *Phillips* generally reaffirmed existing precedent.²² Of particular relevance here, *Phillips* reemphasized the

16. See Michael S. Connor & John A. Wasleff, *Where Do We Go from Here? A Critical Examination of Existing Claim Construction Doctrine*, 86 J. PAT. & TRADEMARK OFF. SOC’Y 878, 878 (2004) (noting competing “paradigms of claim construction” in Federal Circuit opinions); Timothy R. Holbrook, *Substantive Versus Process-Based Formalism in Claim Construction*, 9 LEWIS & CLARK L. REV. 123, 146 (2005) (noting “a significant split at the Federal Circuit” over approaches to claim construction); Nard, *supra* note 7, at 4–6 (discussing the use of “textualist” and “hyper-textualist” claim construction methodologies); R. Polk Wagner & Lee Petherbridge, *Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance*, 152 U. PENN. L. REV. 1105, 1112 (2004) (classifying Federal Circuit judges as “Proceduralists,” “Holistics,” or “Swing Judges”). *But cf.* Janicke, *supra* note 14, at 110 (arguing that the Federal Circuit’s success in settling a number of issues “is obscured by diversity of thought about the new, finer questions invariably generated by those very achievements”).

17. 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

18. *Id.* at 1320–23.

19. 361 F.3d 1363 (Fed. Cir. 2004).

20. *Id.* at 1371.

21. *Id.* at 1370–71.

22. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc) (reaffirming “the basic principles of claim construction” set forth in earlier cases); *see also* Joseph Scott Miller & James A. Hilsenteger, *The Proven Key: Roles and Rules for Dictionaries at the Patent Office and the Courts*, 54 AM. U. L. REV. 829, 907 (2005) (“The court in *Phillips* effectively dials its claim construction jurisprudence back to October 15, 2002, just before *Telegenix* was decided.”); Kristen Osenga, *Linguistics and Patent Claim Construction*, 38 RUTGERS L.J. 61, 80 (2006) (“Instead of embracing the opportunity, the Federal Circuit withdrew to the same unclear method of claim construction that had always existed.”); Michael Saunders, Note, *A Survey of Post-Phillips Claim Construction Cases*, 22

importance of the rule that claims must be construed from the perspective of one having ordinary skill in the relevant technological art, where the “relevant technological art” is that of the patented invention, rather than some other “technical art” that might be thought relevant, such as the art of claim drafting or claim construction.²³

The Federal Circuit’s restatement of this ordinary artisan rule was not surprising. Although the Supreme Court failed to mention the rule in *Markman*, its continued validity may be one of the few points on which Federal Circuit judges²⁴ and commentators²⁵ have consistently agreed. Indeed, both judges and commentators have invoked the rule as a basis for proposed reforms to the law of claim construction.

BERKELEY TECH. L.J. 215, 215 (2007) (“*Phillips* excises certain portions of disfavored case law while reaffirming the basic structure of claim construction . . .”).

23. *Phillips*, 415 F.3d at 1313–14. In this Article, the word “technological” is generally used to refer to the kind of technical knowledge possessed by, or meant to be conveyed by a patent to, one of skill in the art of a patented invention — even though, strictly speaking, a patented invention may not need to be associated with a recognized “technological ar[t].” *Ex parte Lundgren*, 76 U.S.P.Q.2d (BNA) 1385, 1388 (B.P.A.I. 2005). *But cf. In re Comiskey*, 499 F.3d 1365, 1375 (Fed. Cir. 2007) (“The Constitution explicitly limited patentability to the national purpose of advancing the useful arts — the process today called technological innovation.” (internal quotation marks omitted)).

24. Craig Allen Nard has observed:

Upon reading Federal Circuit opinions written by both hypertextualists and pragmatic textualists, one reads time and again that “the focus in construing disputed terms in claim language is . . . on the objective test of what one of ordinary skill in the art at the time of the invention would have understood the term to mean.”

Nard, *supra* note 7, at 52 (quoting *Markman v. Westview Instruments, Inc. (Markman I)*, 52 F.3d 967, 986 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996)).

25. *See, e.g., Jennifer K. Bush et al., Six Patent Law Puzzlers*, 13 TEX. INTELL. PROP. L.J. 1, 11 (2004) (“[E]veryone agrees . . . that (absent situations where the patentee clearly adopts another definition) claims must be given their ordinary meaning to a person of ordinary skill in the art . . .” (emphasis added)); Connor & Wasleff, *supra* note 16, at 880 (criticizing the Federal Circuit for “los[ing] track of the intended audience of the patent document . . . a person of ordinary skill in the art”); Miller, *supra* note 8, at 187–88 (2005) (suggesting that claim interpretation would benefit from emphasizing fidelity to “the perspective of a person having ordinary skill in the art”); Miller & Hilsenteger, *supra* note 22, at 883 (accepting that the “ordinary meaning” to be determined is that to a “person of ordinary skill in the art”); Kelly Casey Mullally, *Patent Hermeneutics: Form and Substance in Claim Construction*, 59 FLA. L. REV. 333, 365 (2007) (“A substantive methodology properly emphasizes the person of ordinary skill in the art at the forefront of the claim construction inquiry and the vast amount of knowledge attributed to that person.” (emphasis added)); Nard, *supra* note 7, at 53 (“[O]nly patent law’s [ordinary artisan] is positioned to provide the technical knowledge that is needed to arrive at a meaning consistent with how the disputed claim language is understood in the germane technological community.”); Osenga, *supra* note 22, at 101–02 (arguing that “the community whose understanding and shared reaction should be the focus of interpretation is that collectively represented by the [ordinary artisan]” (emphasis added)); Rai, *supra* note 15, at 1046 (“[U]nder long-established patent case law, patent claims are *not* directed at the ordinary speaker of English; rather, they are directed at the aforementioned [ordinary artisan].”); Michael Risch, *The Failure of Public Notice in Patent Prosecution*, 21 HARV. J.L. & TECH. 179, 204 (2007) (arguing for use of an ordinary artisan rule in United States Patent and Trademark Office (“USPTO”) examinations as well as in litigation).

Commentators have repeatedly cited it as a reason to rely more on evidence, such as expert testimony, that is “extrinsic” to the patent and its prosecution history.²⁶ Likewise, Chief Judge Michel of the Federal Circuit recently argued for reconsideration of claim construction’s status as a purely legal issue by contrasting the inquiry under the ordinary artisan rule (“How would the average artisan in the relevant field of technology understand the disputed claim terms . . . ?”) with that undertaken in interpreting a statute (“What does the disputed term mean to me, the judge, as an artisan in the law?”).²⁷

I take the heterodox position of challenging the ordinary artisan rule for claim construction. This Article argues that, at least within a patent system that, like ours, relies primarily on claims to mark the boundaries of patent scope, a fundamental distinction should be drawn between technology-centered questions of patent validity and more lawyerly questions of claim meaning.²⁸ For validity questions such as whether a claimed invention is obvious or inadequately disclosed, reliance on the perspective of the ordinary artisan is both appropriate and statutorily required.²⁹ In the context of claim construction, however, adherence to an ordinary artisan perspective is neither statutorily required nor likely to be socially optimal. In this context, the optimal perspective is likely to be that of a patent attorney, albeit one who has not only legal expertise but also access to the technical knowledge of an artisan.

The argument of this Article proceeds in three Parts. Part II examines how determining the proper governing perspective for claim construction relates to concerns about economic efficiency. In particular,

26. See, e.g., James B. Altman et al., *The Law of Patent Claim Interpretation: The Revolution Isn't Finished*, 8 FED. CIR. B.J. 93, 112 (1998) (criticizing “the unfounded expectation that judges normally can construe patents in line with the ‘skilled in the art’ standard without the benefit of extrinsic evidence”); Connor & Wasleff, *supra* note 16, at 892 (“[T]he exclusion of expert testimony from the claim construction process is a fundamental mistake that defeats the doctrinal goal of understanding the patent from the view of a person of skill in the art.”); Nard, *supra* note 7, at 56 (arguing that the special role of the ordinary artisan in patent law means that “extrinsic evidence is as much a part of the public record as is intrinsic evidence”); Osenga, *supra* note 22, at 103 (“In order to truly return the [ordinary artisan] to the claim construction table, a number of changes in current claim construction methodology must be implemented.”); cf. Mullally, *supra* note 25, at 365 (arguing that a “substantive methodology properly emphasize[ing] the person of ordinary skill in the art . . . necessitates an expansive inquiry into context”). A patent’s “prosecution history” is the official record of correspondence between an applicant and the USPTO during the latter’s pre-issuance examination of the patent. See DONALD S. CHISUM ET AL., PRINCIPLES OF PATENT LAW 936 (3d ed. 2004) (defining the “prosecution history” as “the record of proceedings in the PTO on the application upon which the patent was issued”).

27. *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 469 F.3d 1039, 1040 (Fed. Cir. 2006) (Michel, C.J., dissenting from denial of reh’g en banc) (internal quotation marks omitted).

28. See Joseph Mueller, *Claims as Pointers: The Statutory Approach to Claim Construction*, 12 J. INTEL. PROP. L. 501, 504 (2005).

29. See 35 U.S.C. § 112 para. 1 (2000) (setting forth the Patent Act’s enablement requirement).

Part II discusses why it makes economic sense to use a perspective for claim construction that matches the perspective of claims' basic "interpretive community."³⁰

Part III explains how use of an ordinary artisan perspective in assessing nonobviousness and enablement has led to a common but incorrect assumption that the entire patent must be read, for all purposes, as addressed to an artisan. Part III shows not only that this assumption has a surprisingly weak historical pedigree, but also that it is substantially contradicted by reality. Generally speaking, artisans work with technology, not with patent claims. Such claims are not generated primarily to increase scientific or technological understanding, but instead to provide notice of patent scope to United States Patent and Trademark Office ("USPTO") examiners, patent attorneys and agents, and interested businesspersons. These individuals typically lack the skill in the art that an ordinary artisan possesses. Artisans as artisans are not typically part of this interpretive community.

Part IV argues for replacing the ordinary artisan rule with a rule declaring the governing perspective of claim construction to be a hybrid one: the perspective of a patent attorney with access to the technological knowledge of an ordinary artisan. Because of artisans' general lack of participation in the interpretive community for patent claims, their views on claim meaning are likely to be too idiosyncratic and personal for a legal regime that seeks to use claims to achieve broad notice of patent scope. Hence, it should not be surprising that the various subrules and conventions of claim construction, which have a strong tendency to reflect the views and mores of claims' actual interpretive community, have become disconnected from the ordinary artisan perspective.

The proposed attorney-plus-artisan perspective would more accurately match the nature of claims' interpretive community. Use of this perspective instead of the ordinary artisan perspective should therefore help improve not only the law's coherence and transparency, but also its predictability. The hybrid perspective would help determine how properly to weigh different kinds of evidence regarding claim meaning. It may also help courts to resolve nettlesome questions about claim construction's "legal," as opposed to "factual," nature.³¹ The hybrid perspective acknowledges both the legal and the factual aspects of claim construction, while making clear the general primacy of its "legal" component. Consequently, if courts recognized that this

30. STANLEY FISH, IS THERE A TEXT IN THIS CLASS? THE AUTHORITY OF INTERPRETIVE COMMUNITIES 14 (1980) ("[I]t is interpretive communities, rather than either the text or the reader, that produce meanings and are responsible for the emergence of formal features.").

31. *Cf. Amgen*, 469 F.3d at 1040 (Michel, C.J., dissenting from denial of reh'g en banc) (questioning "the premise that claim construction is always a purely legal exercise, devoid of factual content").

perspective properly governs claim construction, they could more comfortably declare construction to be primarily a legal question while also acknowledging its potential reliance on facts, such as technological information that an attorney might ask an artisan to supply.

II. ARGUMENT FOR AN AUDIENCE-ORIENTED PERSPECTIVE

Before developing an argument about what particular perspective should be used in claim construction, it is worth considering (1) why it makes sense to associate claim construction with a particular perspective, and (2) why it makes sense for this perspective to be objective and audience-oriented, rather than more subjective and personal to the claim's author. A threshold question is what a claim construction methodology should seek to accomplish.

One might imagine a number of goals for such a methodology, including:

- consistency of claim constructions from case to case;
- predictability of claim constructions in any given case;
- clarity and internal coherence of claim construction law;
- minimization of the costs incurred by courts and parties in construing claims or predicting their construction;
- minimization of the costs of drafting claims of the desired breadth; and
- promotion of policy aims not specific to claim drafting or construction, such as ensuring that patent holders receive adequate but not excessive rewards.³²

These potential goals can be understood to advance patent law's constitutionally sanctioned purpose: “[t]o promote the Progress of Science and useful Arts.”³³ Consistency and predictability tend to promote greater and more efficient investment in technology — for example, by permitting confidence that patent rights protect the business interests of their owners and, on the other hand, by providing assurance that a third party's planned course of conduct is non-infringing. Legal transparency and coherence tend to decrease errors, reduce the costs of achieving desired levels of consistency and predictability, and make it easier for policymakers and the public to evaluate the patent system. Because transaction costs are “the main

32. See Christopher A. Cotropia, *Patent Claim Interpretation Methodologies and Their Claim Scope Paradigms*, 47 WM. & MARY L. REV. 49, 128 (2005) (“By using its discretion, a court can use interpretation methodology as a ‘lever’ to implement specific patent policies by directly impacting claim scope.”).

33. U.S. CONST. art. I, § 8, cl. 8. The first few goals may also be understood, in a less openly utilitarian way, as advancing “the inner morality of the law.” LON L. FULLER, *THE MORALITY OF LAW* 42 (rev. ed. 1969).

reason for failures of [the law's] Coasean irrelevance,"³⁴ minimization of the transaction costs associated with drafting and construing claims would commonly be expected to improve overall economic efficiency. Finally, promotion of other policy aims, such as the proper tailoring of rewards for inventors, may also improve the allocation of societal resources.

How might the use of a particular perspective for claim construction advance such goals? Unless the "other policy aims" not specific to claim drafting or construction, can be agreed on, it is likely to be unclear how any particular governing perspective will advance them. Even if such aims are agreed on, it is likely to be unclear that a perspective specifically attuned to them, such as "the perspective of a person especially concerned about the possibility of claim overbreadth," will function better than a separate subrule for claim construction, such as "When claims are ambiguous, choose the narrowest available construction." Because of uncertainty about how and whether a methodology for construction should seek to promote "other policy aims," I will leave aside the question of what perspective, if any, is best suited to advance such aims, and focus on how the use of a particular perspective can advance the goals of consistency, predictability, clarity, coherence, and cost minimization.

It is well known that how a person — or an interpretive community — understands a legal document can depend strongly on that person's mental framework and background knowledge.³⁵ Association of claim construction with a particular perspective can indicate the knowledge and attitudes with which individuals should approach the task. The assigned perspective may signal the purposes that should inform construction, for example: maximizing fidelity to the "true nature" of a technological advance; achieving the mean or median construction that would have been predicted *ex ante*; or construing language to provide the clearest delineation of rights *ex post*. The per-

34. NICHOLAS L. GEORGAKOPOULOS, PRINCIPLES AND METHODS OF LAW AND ECONOMICS 99 (2005).

35. See Osenga, *supra* note 22, at 62 (observing that interpretation tends to result from a combination of "an understanding that either a priori exists based on our earlier encounters with [a] word or is obtained from a dictionary in cases in which we lack previous knowledge"); see also William S. Blatt, *Interpretive Communities: The Missing Element in Statutory Interpretation*, 95 NW. U. L. REV. 629, 666 (2001) (stating that interpretive "[a]greement is more likely for issues involving a single [interpretive] community"); Lefstin, *supra* note 15, at 1056 (noting that work in experimental psychology indicates that "the order in which observers receive evidence or arguments influences their final decision"); Andrei Marmor, *What Does the Law Say? Semantics and Pragmatics in Statutory Language*, in ANALISI E DIRITTO (forthcoming) (manuscript at 6, available at <http://ssrn.com/abstract=1009622>) (describing with approval the view that understanding of language significantly reflects "general norms of conversation that apply to the relevant speech situation, and specific contextual knowledge that is shared by speaker and hearer in the circumstances of the utterance").

spective may also signal the kinds of knowledge to be assembled before settling on a construction. Such signals can, in turn, affect the procedures used to construe claims and the degree to which claim construction is viewed as a legal or factual question.³⁶

If the assigned perspective for claim construction is meant to be an objective one that maximizes the predictability of construction for claims' primary audience — the community of people for whom understanding patent claims is an important and regular enterprise — the optimal perspective may be a sort of average audience member's view. Use of such a view would minimize the need for members of claims' interpretive community to invest resources in acquiring the perspective of *someone else*. Use of a standard perspective can also facilitate the drafting of patents and claims. If general characteristics of a claim's "model reader"³⁷ are legally fixed in advance, a claim drafter may have less to do to ensure that a patent's text contains sufficient indications of how the claim should be read. If, instead, a claim were to be read according to a non-standard perspective, such as the subjective perspective of the drafter, then the drafter would frequently have to do more to signal the intended meaning.

There is an additional, least-cost-avoider rationale for using the objective perspective of an average audience member. The Patent Act already suggests such concerns by requiring that a patent contain claims "particularly pointing out" the patent's scope.³⁸ To save society the costs associated with ambiguous claims, it may make sense to provide the patent applicant with an incentive to avoid ambiguity through appropriate choice of language in the claims, the specification,³⁹ and the prosecution history.⁴⁰ The public audience for patent

36. As indicated by the opinions of a number of Federal Circuit judges in connection with the denial of a petition for a rehearing en banc in late 2006, the degree to which construction should be acknowledged to include factual determinations remains hotly disputed. *Amgen Inc. v. Hoechst Marion Roussel, Inc.*, 469 F.3d 1039, 1041 (Fed. Cir. 2006) (Michel, C.J., dissenting) ("I believe the time has come for us to re-examine *Cybor*'s no deference rule."); *id.* at 1043 (Newman, J., dissenting) ("The Federal Circuit's position that patent interpretation requires more rigorous appellate review than other fact/law issues has not well withstood the test of experience."); *id.* at 1044 (Rader, J., dissenting) ("I urge this court to accord deference to the factual components of the lower court's claim construction."); *id.* at 1046 (Moore, J., dissenting) ("I believe this court should have taken this case en banc to reconsider its position on deference to district court claim construction . . ."); *id.* at 1045 (Gajarsa, J., concurring) ("In an appropriate case we would be willing to reconsider limited aspects of the *Cybor* decision.")

37. See Umberto Eco, *Overinterpreting Texts*, in INTERPRETATION AND OVERINTERPRETATION 45, 64 (Stefan Collini ed., 1992) ("A text is a device conceived in order to produce its model reader.")

38. 35 U.S.C. § 112 para. 2 (2000).

39. In this Article, the term "specification" is generally used to describe those parts of the patent document other than the claims. Cf. *Gen. Foods Corp. v. Studiengesellschaft Kohle mbH*, 972 F.2d 1272, 1274 (Fed. Cir. 1992) (describing a patent as having "two primary parts: (1) a written description of the invention, . . . called the 'specification,' . . . and (2)

claims is only tenuously represented by USPTO examiners during patent prosecution, and thus has little opportunity to shape claim language to avoid ambiguity. Because the patent applicant is better positioned to minimize uncertainty and its associated costs, it may make sense to leave the applicant with two “options”: establish a public record that avoids ambiguity or be bound by an audience-oriented perspective for resolving ambiguity.⁴¹

Finally, given potential interest in having patent law develop in harmony with the law in other fields,⁴² it is at least reassuring that such reasons for using an audience-oriented perspective are supported by analogy to certain approaches to construing statutes and standard-term contracts.⁴³ Like patents, standard-term contracts are designed to create rights against a substantial number of persons who have little, if any, say in the documents’ precise terms. Consistent with the arguments of some commentators, courts tasked with interpreting such contracts have sometimes openly deviated from the assumption “that in interpreting a contract the court merely carries out ‘the intentions of the parties.’”⁴⁴ These courts have instead employed objective, audi-

claims . . .”). Outside of this Article, the “specification” is sometimes understood to include both the patent’s “written description” and its claims. *See, e.g.*, 35 U.S.C. § 112 paras. 1–2.

40. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc) (“[O]ur cases recognize that the specification may reveal a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess.”).

41. Analogy to the principle that contracts should be construed *contra proferentem* could support a rule that claims should be construed against the drafter. *See* Burk & Lemley, *supra* note 14, at 54 (proposing “narrowly construing claims against the drafter”); Jessica C. Kaiser, Note, *What’s That Mean? A Proposed Claim Construction Methodology for Phillips v. AWH Corp.*, 80 CHI.-KENT L. REV. 1009, 1035 (2005). Such a rule, however, would threaten to make claim construction overly dependent on the particular case: a construction that is *contra proferentem* relative to the interests of one potential infringer might be *pro proferentem* with respect to another.

42. *See, e.g.*, *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388, 394 (2006) (holding that a district court’s discretion to deny injunctive relief “must be exercised consistent with traditional principles of equity, in patent disputes no less than in other cases”).

43. *See* Henry E. Smith, *The Language of Property: Form, Context, and Audience*, 55 STAN. L. REV. 1105, 1114–15, 1174 (2003) (discussing how legal rules are frequently adapted to fit the relative ease of communication in a particular context).

44. 2 E. ALLAN FARNSWORTH, FARNSWORTH ON CONTRACTS § 7.9, at 452 (3d ed. 2004). Even when courts more ostensibly adhere to a rule calling for interpretations to be consistent with parties’ intent, the instructive and explanatory value of this rule is often in serious doubt:

The court does indeed carry out [the parties’] intentions in those relatively rare cases in which the parties attached the same meaning to the language in question. But if the parties attached different meanings to that language, the court’s task is the more complex one of applying a standard of reasonableness to determine which party’s intention is to be carried out at the expense of the other’s. And if the parties attached no meaning to that language, its task is to find by a standard of reasonableness a meaning that does not accord with any intention at all.

Id.

ence-oriented or “reasonable expectations” approaches that look to the likely understandings of a contract’s targets, rather than its drafter.⁴⁵ Similarly, courts have frequently used “reader-centered strateg[ies]” in statutory interpretation,⁴⁶ another situation in which a document can trigger public notice concerns by providing broadly reaching rights against the world.⁴⁷

In sum, both economic concerns and analogies to interpretive approaches in other legal areas suggest that choice of a proper audience-oriented perspective for claim construction is likely to advance aims of consistency, predictability, efficiency, and coherence. But what is the nature of the audience for claims? It is in answering this question that the law currently misses the mark.

III. THE ORDINARY ARTISAN RULE IN LAW, HISTORY, AND PRACTICE

In patent law, it is conventionally stated that claims “are addressed” to persons of ordinary skill in the technology of the invention.⁴⁸ I contend that this conventional statement is wrong.

45. See, e.g., *id.* § 7.11, at 461 (discussing the interpretation of standard-term contracts according to the perspective of “a reasonable party in the position of the adhering party,” and of insurance contracts in accordance with what “an insured would reasonably expect”); see also Kenneth S. Abraham, *Judge-Made Law and Judge-Made Insurance: Honoring the Reasonable Expectations of the Insured*, 67 VA. L. REV. 1151, 1151, 1153–54 (1981); Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporate Contracting (or “The Economics of Boilerplate”)*, 83 VA. L. REV. 713, 765 (1997); Todd D. Rakoff, *Contracts of Adhesion: An Essay in Reconstruction*, 96 HARV. L. REV. 1173, 1268–70 (1983).

46. Felix Frankfurter, *Some Reflections on the Reading of Statutes*, 47 COLUM. L. REV. 527, 536 (1947) (“If a statute is written for ordinary folk, it would be arbitrary not to assume that Congress intended its words to be read with the minds of ordinary men. If they are addressed to specialists, they must be read by judges with the minds of the specialists.”); Morell E. Mullins, Sr., *Tools, Not Rules: The Heuristic Nature of Statutory Interpretation*, 30 J. LEGIS. 1, 20 (2003) (describing “reader-centered” and “writer-centered” approaches); see also Blatt, *supra* note 35, at 630 (“Judges vary their readings of statutes depending on which community comprises the audience for the decision, and rightly so.”).

47. See ANTONIN SCALIA, *A MATTER OF INTERPRETATION: FEDERAL COURTS AND THE LAW* 17 (1997) (arguing that democracy and fairness require that statutes be construed in accordance with “a sort of ‘objectified’ intent — the intent that a reasonable person would gather from the text of the law, placed alongside the remainder of the *corpus juris*”). On at least one ground, the case for a reader-oriented approach is even stronger in the patent context: patent claim interpretation generally does not implicate concerns about democratic legitimacy and separation of powers that tend to justify attention to legislative intent. See Cheryl Boudreau et al., *What Statutes Mean: Interpretative Lessons from Positive Theories of Communication and Legislation*, 44 SAN DIEGO L. REV. 957, 961 (2007) (pointing to constitutional concerns as a reason to “assume that interpreters should restrict themselves to discerning the legislature’s intended meaning”).

48. See, e.g., *In re Salem*, 553 F.2d 676, 683 (C.C.P.A. 1977) (quoting *In re Myers*, 410 F.2d 420, 425 (C.C.P.A. 1969)).

Although a patent's written description may be properly considered to be "addressed to and intended to be read by others of skill,"⁴⁹ a patent's claims are generally not directed to that audience. Disclosure of technological know-how is a primary purpose of a patent's written description,⁵⁰ but not of its claims. Instead, the primary purpose of claims is to mark the bounds of proprietary territory.⁵¹ Consistent with this purpose, claims are commonly drafted by patent attorneys or agents, and their primary audience is united more by commercial interest and legal duty than by technological expertise. A mixture of businesspersons, lawyers, USPTO examiners, and judges, this audience consists largely of individuals who lack an artisan's skill in the relevant technological art.

This Part begins by showing how the subrules and practice of claim construction have developed in accordance with claims' actual audience. The Part then provides an account of how modern courts nonetheless came to declare claim construction to be governed by the perspective of an ordinary artisan. The question of what should be done in light of the discrepancy between stated rule and actual practice is addressed in Part IV.

A. Implicit Recognition of a Non-Artisan Audience for Patent Claims

For years commentators have complained that the approach to claim construction mandated by Federal Circuit decisions actually has little to do with trying to determine how an ordinary artisan would understand patent claims.⁵² I agree. The courts and USPTO in fact assert and follow an intricate set of subrules for claim construction that are far more tailored to determining, and rendering determinate, the views of an ordinary patent lawyer than those of an ordinary artisan.

49. Phillips v. AWH Corp., 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc).

50. See 35 U.S.C. § 112, para. 1 (2000).

51. See *id.* para. 2.

52. See, e.g., Altman et al., *supra* note 26, at 102–03 (asserting that *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996), "is inconsistent with the established [artisan] standard for construing patent claims"); Osenga, *supra* note 22, at 87 ("[A]lthough the Federal Circuit has repeatedly stated that claim terms should be given the meanings they would have had to [an ordinary artisan], the Federal Circuit has removed (in practice, if not in name) [that person] from much of its claim construction process." (footnotes omitted)); see also Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575, 1649 n.269 (2003) (noting with apparent skepticism that the Federal Circuit "nominally undertakes" the burden of determining the views of an ordinary artisan in construing patent claims).

1. Courts' Actual Claim Construction Methodology

Two aspects of modern patent practice provide particularly forceful demonstrations of its conflict with the ordinary artisan rule: (1) courts' disfavor for claim constructions that rely on evidence outside a patent and its prosecution history, and (2) the intricacy and abstruseness of the judicial and administrative subrules that regulate claim drafting and construction. The former means that courts are reluctant to rely on, or even to admit, evidence that could be most directly probative of the understandings and mindset of an ordinary artisan. The latter more directly makes the most important "art" for construing patent claims the lawyerly art of claim construction itself — an art that the Supreme Court itself has recognized to be "a special occupation, requiring, like all others, special training and practice."⁵³

As for the first aspect of modern practice, it is now well-established that courts prefer constructions to be based on "intrinsic evidence" — i.e., the patent's claims, specification, and prosecution history — instead of "extrinsic evidence," a residual category including everything from dictionary definitions and published scientific articles to in-court testimony.⁵⁴ More than a decade ago, the Federal Circuit made clear in *Vitronics Corp. v. Conceptronic, Inc.*,⁵⁵ that "expert testimony . . . on the proper construction of a disputed claim term . . . may only be relied upon if the patent documents, taken as a whole, are insufficient to enable the court to construe disputed claim terms." The court expected such a situation to occur "rarely, if ever."⁵⁶

In *Phillips v. AWH Corp.*,⁵⁷ the court diluted the *Vitronics* principle by indicating that a district court may generally consult extrinsic evidence "in its sound discretion."⁵⁸ But the court also explicitly reaffirmed *Vitronics*,⁵⁹ quoted *Vitronics*' assertion that the specification is "[u]sually . . . dispositive,"⁶⁰ and reemphasized the court's belief that extrinsic evidence is more suspect than intrinsic evidence.⁶¹ Subse-

53. *Markman v. Westview Instruments, Inc. (Markman II)*, 517 U.S. 370, 388 (1996) (quoting *Parker v. Hulme*, 18 F. Cas. 1138, 1140 (C.C. Pa. 1849)).

54. *See id.*

55. 90 F.3d 1576 (Fed. Cir. 1996).

56. *Id.* at 1585.

57. 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

58. *Id.* at 1319.

59. *Id.* at 1312 ("What we said in [*Vitronics* and other] cases bears restating, for the basic principles of claim construction outlined there are still applicable, and we reaffirm them today.")

60. *Id.* at 1315.

61. *Id.* at 1312–15, 1317 (stating that a court must always consider the claims and the specification, and "should also consider the patent's prosecution history, if it is in evidence")

quent Federal Circuit and district court opinions have confirmed that *Phillips*' dilution of the *Vitronics* principle was marginal at most.⁶²

Thus, current law treats as highly suspect the most direct evidence of how an ordinary artisan would interpret claims — testimony from a representative artisan about his or her understanding. Rather than relying heavily on such evidence, courts construe claims primarily on the basis of the patent and its prosecution history. The USPTO follows suit almost perforce: the USPTO is generally bound by the courts' understanding of substantive patent law,⁶³ and confidentiality concerns mean that its examiners face tight restrictions on their ability to consult any outside evidence, never mind outside experts.⁶⁴ Given these combined forces of law and circumstance, it is unsurprising that the USPTO instructs its examiners that “[t]he meaning of every term used in any of the claims should be apparent from the descriptive portion of the specification.”⁶⁵

The disfavored status of expert testimony as evidence for claim construction contrasts markedly with its status as evidence for nonobviousness⁶⁶ and infringement under the doctrine of equivalents.⁶⁷ If an

(quoting *Markman v. Westview Instruments, Inc. (Markman I)*, 52 F.3d 967, 980 (Fed. Cir. 1995), *aff'd*, 517 U.S. 370 (1996)).

62. *See* *Network Commerce, Inc. v. Microsoft Corp.*, 422 F.3d 1353, 1361 (Fed. Cir. 2005) (discounting expert testimony unsupported by “references to industry publications or other independent sources” and “at odds with the intrinsic evidence”); *Chic Optic, Inc. v. E’Lite Optik, Inc.*, 524 F. Supp. 2d 794, 815 (N.D. Tex. 2007) (“[R]eliance on [evidence regarding prior art] is unnecessary, and indeed improper, when the disputed terms can be understood from a careful reading of the public record.” (quoting *Vitronics Corp. v. Conceptor, Inc.*, 90 F.3d 1576, 1584 (Fed. Cir. 1996)) (internal quotation marks omitted)); *Intelligent Computer Solutions, Inc. v. Voom Techs., Inc.*, 509 F. Supp. 2d 847, 864 (C.D. Cal. 2006) (finding expert testimony “not helpful” and construing a claim term in accordance with the specification); *Roche Diagnostics Corp. v. Apex Biotech. Corp.*, 455 F. Supp. 2d 840, 846 (S.D. Ind. 2005) (“Most of the time, [intrinsic] evidence will provide sufficient information for construing the claims.”).

63. *See* *Merck & Co. v. Kessler*, 80 F.3d 1543, 1549–50 (Fed. Cir. 1996) (“[T]he broadest of the PTO’s rulemaking powers . . . does NOT grant the Commissioner the authority to issue substantive rules.” (emphasis in original)); *cf. In re Fisher*, 421 F.3d 1365, 1372 (Fed. Cir. 2005) (“The [USPTO’s Manual of Patent Examining Procedure] and Guidelines ‘are not binding on this court, but may be given judicial notice to the extent they do not conflict with the statute.’” (quoting *Enzo Biochem v. Gen-Probe*, 323 F.3d 956, 964 (Fed. Cir. 2002))).

64. *See* U.S. PATENT & TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 904.02(c), at 900-51 (8th ed., rev. 6 2007) [hereinafter MPEP] (“Non-secure Internet search, browse, or retrieval activities that could disclose proprietary information directed to a specific application which has not been published . . . are NOT permitted.” (emphasis in original)); Beth Simone Noveck, “Peer to Patent”: *Collective Intelligence, Open Review, and Patent Reform*, 20 HARV. J. L. & TECH. 123, 138 (2006) (“Examiners must rely on internal databases and are not permitted to consult outside sources.”).

65. MPEP, *supra* note 64, § 608.01(o), at 600-92.

66. When the issue is nonobviousness to an ordinary artisan, questions of fact on which a technological expert might opine have frequently been all but determinative of the ultimate issue. *See* MARTIN J. ADELMAN ET AL., CASES AND MATERIALS ON PATENT LAW 355–56 (2d ed. 2003) (noting that the question of whether there was a motivation to combine prior

ordinary artisan perspective truly governed claim construction, one would expect courts to focus on artisans' understandings as much as courts do in these other contexts.⁶⁸ That courts focus elsewhere suggests that they believe claim construction has a different relationship to artisan understandings than the ordinary artisan rule suggests.

Such a belief is consistent with claims' status as a highly stylized and facially legalist portion of a patent.⁶⁹ As required by statute, claims appear separately at the end of the specification.⁷⁰ Further, they have a peculiar grammar shaped by USPTO rules.⁷¹ For example, a

art references was a question of fact, despite being "practically synonymous with the obviousness determination itself").

67. The Federal Circuit has found that "the difficulties and complexities of the doctrine [of equivalents] require that evidence be presented to the jury or other fact-finder through the particularized testimony of a person of ordinary skill in the art." *Aquatex Indus., Inc. v. Techniche Solutions*, 479 F.3d 1320, 1329 (Fed. Cir. 2007) (emphasis added).

68. See Ehab M. Samuel, *Phillips v. AWH Corp., Inc.: A Baffling Claim Construction Methodology*, 16 *FORDHAM INTELL. PROP. MEDIA & ENT. L.J.* 519, 561 (2006) ("If we are to focus on how a person skilled in the art would understand the claim terms, we would probably need extrinsic evidence, such as expert testimony.").

69. See *Markman v. Westview Instruments, Inc. (Markman II)*, 517 U.S. 370, 389 (1996) ("[T]he claims of patents have become highly technical in many respects as the result of special doctrines relating to the proper form and scope of claims that have been developed by the courts and the Patent Office." (quoting William Redin Woodward, *Definiteness and Particularity in Patent Claims*, 46 *MICH. L. REV.* 755, 765 (1948))); *Thermo King Corp. v. White's Trucking Serv., Inc.*, 292 F.2d 668, 675 n.9 (5th Cir. 1961) (comparing a claim's 334 words to the "breath-taking" length of federal tax laws); *Thurber Corp. v. Fairchild Motor Corp.*, 269 F.2d 841, 850 (5th Cir. 1959) ("There is no question but what the claims are complex and drafted with language and in a style that makes them difficult if not impossible for laymen — and indeed, for most lawyers and judges — to understand."); ROBERT C. FABER, *LANDIS ON MECHANICS OF PATENT CLAIM DRAFTING* 1-2 (5th ed. 2006) ("[V]arious rules and practices have grown up by case law, Commissioner's regulations, and custom since 1836 as to how and how not to fulfill the statutory mandate of *particularly pointing out and distinctly claiming*."); David Krinsky, *The Supreme Court, Stare Decisis, and the Role of Appellate Deference in Patent Claim Construction Appeals*, 66 *MD. L. REV.* 194, 200 (2006) ("Patents are carefully drafted legal documents whose interpretation is based on over two hundred years of case law and on doctrines that are not always obvious even to nonpatent attorneys."); William Redin Woodward, *Definiteness and Particularity in Patent Claims*, 46 *MICH. L. REV.* 755, 755 (1948) ("To the uninitiated the professional jargon of patents, and particularly of patent claims, is somewhat mystifying even in the most ordinary cases."); cf. Timothy R. Holbrook, *Possession in Patent Law*, 59 *SMU L. REV.* 123, 160 (2006) (arguing that, by applying "estoppel-like principles" in using the specification for claim construction, the Federal Circuit "has shifted the patent from being a technical document to a legal one").

70. 35 U.S.C. § 112 para. 2 (2000) ("The specification shall conclude with one or more claims . . .").

71. See John F. Duffy, *On Improving the Legal Process of Claim Interpretation: Administrative Alternatives*, 2 *WASH. U. J.L. & POL'Y* 109, 109 (2000) (describing the "modern claim" as marked by "intricacies and formalities of drafting"); Osenga, *supra* note 22, at 100 ("[F]or better or for worse, patent claims have their own grammar that is not consistent with proper English grammar."). More generally, the Federal Circuit has recognized that the process of obtaining a patent is not easily navigated by one lacking skill in the legal art of patent prosecution, and that the penalty for the absence of such skill may be a patent's ultimate unenforceability. See *Nilssen v. Osram Sylvania, Inc.*, 504 F.3d 1223, 1235 (Fed. Cir. 2007) ("[T]he patent process is a complicated one, one that requires both technical and legal

modern claim is required to be a single clause that concludes a sentence beginning with words such as “The invention claimed is”⁷² Additional rules are intended to promote clarity and standardization. Hence, a patent examiner may reject a claim for lack of a proper antecedent if the direct article “the,” rather than the indirect article “a,” precedes the first appearance of a term such as “lever.”⁷³ Likewise, there are specific rules on how to write a claim requiring the presence of a member of a set such as *A*, *B*, and *C*: saying that the claim includes an element “selected from the group consisting of *A*, *B* and *C*” is permissible,⁷⁴ but saying that the claim includes an element “selected from the group comprising *A*, *B* and *C*” is not.⁷⁵

Courts have effectively added to such rules by finding that specific terms and phrases have particular presumptive meanings when used in patent claims. For example, as innocuous a word as “a” has such a presumptive meaning: at least when preceded by the word “comprising,” the article “a” or “an” in patent parlance carries the meaning of “one or more,” rather than only one.⁷⁶ Thus, the phrase “comprising a lever” generally means “including one or more levers,” rather than “including one and only one lever.” Similarly, use of another seemingly pedestrian word, “means” (as in the phrase “means of providing leverage”), has special significance: it triggers a presumption that the associated language is to be construed in accordance with a statutory provision regarding means-plus-function limitations.⁷⁷

Moreover, when claims are interpreted, points of contention often center on the fine parsing of both syntactic relations between words⁷⁸ and the sometimes precedent-informed meaning⁷⁹ of common, non-

credentials in order to effectively prosecute patents for inventors.”); *cf.* *Lough v. Brunswick Corp.*, 86 F.3d 1113, 1122 (Fed. Cir. 1996) (“The law does not waive statutory requirements for inventors of lesser sophistication.”).

72. MPEP, *supra* note 64, § 6.08.01(m), at 600-84.

73. *See id.* § 706.03(d), at 700-74; *see also id.* § 2173.05(e), at 2100-225.

74. *Id.* § 2173.05(h), at 2100-227 (emphasis added) (internal quotation omitted).

75. *See id.*

76. *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. 2000). *See generally* *FABER*, *supra* note 69, at App. D-1, D-6 to D-7, D-13, D-22 to D-24, D-26 (providing a glossary of recurring claim terms such as “a/an,” “comprises/comprising,” “consisting of,” “in order to,” “said,” “so that,” “the,” “thereby,” and “whereby”).

77. *Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1248 (Fed. Cir. 2005).

78. *See, e.g., Paeco, Inc. v. Applied Moldings, Inc.*, 562 F.2d 870, 876 (3d Cir. 1977) (addressing whether a participial phrase following “foam molded in a mold” modified “foam” or “mold”).

79. The Federal Circuit has, however, warned against excessive reliance on a prior opinion construing a specific word in the context of a different patent. *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1318 (Fed. Cir. 2005) (“A particular term used in one patent need not have the same meaning when used in an entirely separate patent, particularly one involving different technology.”). Nonetheless, prior court constructions are sometimes cited in claim construction rulings even where the words construed cannot be considered to be general patent drafters’ terms of art — like “a,” “the,” or “comprising.” *See, e.g., Wilson Sporting Goods Co. v. Hillerich & Bradsby Co.*, 442 F.3d 1322, 1328 (Fed. Cir. 2006)

technology-specific words.⁸⁰ Hence, claim construction disputes commonly focus on words such as “means,”⁸¹ “a,”⁸² “the,”⁸³ “said,”⁸⁴ “portion,”⁸⁵ “on” and “onto,”⁸⁶ “together,”⁸⁷ “traditionally,”⁸⁸ or “when.”⁸⁹

The bottom line is that, although courts and commentators have sometimes indicated that inventors’ likely lack of linguistic sophistication should be accounted for in claim construction,⁹⁰ this sentiment has not substantially determined either judicial or administrative practice. The actual rules of claim drafting and construction virtually guarantee that anyone untutored in the art of claim construction will

(“This court has previously recognized that the ordinary and customary meaning of ‘annular’ is ‘of or relating to an area formed by two concentric circular or curved regions.’”); *PIN/NIP, Inc. v. Platte Chem. Co.*, 304 F.3d 1235, 1244 (Fed. Cir. 2002) (“We have previously construed the term ‘composition’ in the context of a particular patent claim.”); *see also* 5A DONALD S. CHISUM, *CHISUM ON PATENTS* § 18.03[1][e] (2007) (“Both the Federal Circuit and district court decisions have cited precedents in support of the interpretation of a word or phrase in a patent claim.”); Krinsky, *supra* note 69, at 224 n.148 (“Intriguingly, the Federal Circuit has occasionally applied *stare decisis* — or at least cited to previous claim construction rulings — when construing individual claim terms . . .”).

80. *See* *Burk & Lemley, supra* note 14, at 53 (“[R]ecent Federal Circuit cases have had to decide plausible disagreements over the meanings of the words ‘a,’ ‘or,’ ‘to,’ ‘on,’ ‘about,’ ‘including,’ and ‘through,’ to name but a few.” (footnotes omitted)); Krinsky, *supra* note 69, at 205 (“[D]isputed claim terms, even for technical patents, are often not terms of art, but rather are ordinary English words given their everyday meanings.”); Osenga, *supra* note 22, at 90 (“Most of the terms the [Federal Circuit] construes are not technical terms.”).

81. *See supra* text accompanying note 77.

82. *See supra* text accompanying note 76.

83. *Eastman Chem. Co. v. BASF Aktiengesellschaft*, 47 Fed. Appx. 566, 574 (Fed. Cir. 2002) (criticizing “BASF’s proffered construction [of] ‘the salt’ . . . because it would conflate ‘the salt’ with the term ‘a salt,’ and would render meaningless the word ‘the’”).

84. *Intamin, Ltd. v. Magnetar Techs., Corp.*, 483 F.3d 1328, 1333 (Fed. Cir. 2007) (using the established meaning “of the word ‘said’ in a claim”).

85. *Spinmaster, Ltd. v. Overbreak LLC*, 404 F. Supp. 2d 1097, 1107–08 (N.D. Ill. 2005) (observing that one party “claim[ed] that the term ‘portion’ can refer to both separate parts as well as regions of a whole item,” whereas the other party “argue[d] that ‘portion’ should only refer to a separate part”).

86. *Inverness Med. Switz. v. Warner Lambert Co.*, 309 F.3d 1373, 1382 (Fed. Cir. 2002) (“[D]isposition of the labeled reagent ‘on’ or ‘onto’ the test strip means disposition as a surface layer *or* within the test strip.”).

87. *Foremost in Packaging Sys., Inc. v. Cold Chain Techs., Inc.*, 485 F.3d 1153, 1156 (Fed. Cir. 2007) (“If the insulating block does not extend down into the coolant cavities, the coolant and the insulated block cannot ‘together’ substantially fill the cavity.”).

88. *PC Connector Solutions LLC v. SmartDisk Corp.*, 406 F.3d 1359, 1362–63 (Fed. Cir. 2005) (affirming a district court’s conclusion that “the words ‘normally,’ ‘conventional,’ ‘traditionally,’ and ‘standard’” required devices “in existence at the time of [a patent application’s] filing”).

89. *Renishaw PLC v. Marposs Societa’ per Azioni*, 158 F.3d 1243, 1250 (Fed. Cir. 1998) (“On appeal, Renishaw argues that ‘when’ should receive one of its broader dictionary definitions . . .”).

90. *See, e.g., Autogiro Co. of Am. v. United States*, 384 F.2d 391, 397 (Ct. Cl. 1967) (suggesting that inventors’ relative lack of “facility with words” contributes to imprecision in claims); BEIRNE STEDMAN, *PATENTS* § 119, at 272 (1939) (“Subtilities [sic] and technicalities . . . likely to prove ruinous to a class of the community so inconsiderate and unskilled in business as men of genius and inventors usually are, are to be disregarded.”).

find claims difficult, if not impossible, to understand — at least if “understanding” means having in mind a construction that reasonably approximates a likely court interpretation. Intimate knowledge of the patented invention is no substitute for familiarity with the rules of claim construction. The Federal Circuit has openly conceded that, with respect to special patent terms like the article “a,” it follows the linguistic practices of “the *claim-drafting art*,” not the art of those skilled in the technology of the invention.⁹¹ And as the Federal Circuit has recognized, “it is not unusual for there to be a significant difference between what an inventor thinks his patented invention is and what the ultimate scope of the claims is after allowance by the PTO.”⁹²

This situation need not be considered fundamentally unfair. To borrow a phrase from Britain’s Law Lords, patent claims are generally not communications “*inter rusticos*.”⁹³ Claims are commonly drafted by a patent attorney or agent.⁹⁴ Further, given their specialized form and language, virtually anyone who reads patent claims would recognize that they are a special kind of writing that requires expertise for proper construction. Under such circumstances, it is not only reasonable but also probably fair for the law to recognize that the primary perspective for understanding patent claims should be that of a patent attorney or agent — a member of patent claims’ specialized interpretive community.⁹⁵

91. *Pitney-Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1309 (Fed. Cir. 1999) (emphasis added); cf. ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, *PATENT LAW AND POLICY* 26 (4th ed. 2007) (speaking of “the elaborate ‘art’ of claim drafting”).

92. *Markman v. Westview Instruments, Inc. (Markman I)*, 52 F.3d 967, 985 (Fed. Cir. 1995) (en banc), *aff’d*, 517 U.S. 370 (1996); see also *Crown Cork & Seal Co. v. Aluminum Stopper Co.*, 108 F. 845, 858 (4th Cir. 1901) (justifying the reissue of patents with amended claims in part because of: (1) an inventor’s likely misunderstanding of claim scope, and (2) the claim drafter’s likely lack of skill in the relevant technological art).

93. *Kirin-Amgen Inc. v. Hoechst Marion Roussel Ltd.*, [2004] UKHL 46, at ¶ 34 (appeal taken from EWCA (Civ)) (U.K.) (“[T]he words will usually have been chosen upon skilled advice. The specification is not a document *inter rusticos* for which broad allowances must be made.”). *Inter rusticos* means “amongst the unlearned.” BLACK’S LAW DICTIONARY 839 (8th ed. 2004).

94. See, e.g., *Markman I*, 52 F.3d at 985 (“In fact, commonly the claims are drafted by the inventor’s patent solicitor and they may even be drafted by the patent examiner in an examiner’s amendment (subject to the approval of the inventor’s solicitor).”); Giles S. Rich, *Foreword to CHISUM ET AL.*, *supra* note 26, at iii, vi (“Claims are drafted by attorneys and agents.”); see also KENNETH W. DOBYNS, *A HISTORY OF THE EARLY PATENT OFFICES: THE PATENT OFFICE PONY* 129 (1997) (noting that a single law firm prosecuted about one-third of U.S. patents granted during “its percentage-peak years around 1860” and “over 3.5 percent of all patents issued by” 1994); Douglas Lichtman, *Rethinking Prosecution History Estoppel*, 71 U. CHI. L. REV. 151, 161 (2004) (“Issued patents typically identify the law firm that represented the applicant during prosecution.”).

95. See KENT GREENAWALT, *LEGISLATION: STATUTORY INTERPRETATION: 20 QUESTIONS* 80 (1999) (“[W]hen phrases themselves are so opaque that laypersons would realize they have a special legal or technical meaning, it is less troublesome to suppose that it is up to lawyers to find and reveal that meaning.”); Frederick Schauer, *The Practice and*

2. Gillette's Razor: An Illustration of Claim Construction in Action

The majority and dissenting opinions from Federal Circuit judges in *Gillette Co. v. Energizer Holdings, Inc.*,⁹⁶ provide illustrative examples of modern claim construction practice. Even though the opinions differed on the merits, they both pursued claim construction as a matter of text-driven exegesis lacking direct reliance on the perspective of an ordinary artisan.⁹⁷

In August 2003, Gillette sued Energizer, alleging that Energizer's four-bladed Quattro razor infringed a Gillette patent.⁹⁸ To protect sales of Gillette razors such as the three-bladed Mach3, Gillette moved for a preliminary injunction.⁹⁹ The district court denied the motion because it found that Gillette's patent could not cover a razor with four, as opposed to three, blades.¹⁰⁰ Like Gillette's Mach3, all embodiments of the invention described in Gillette's patent had three and only three blades.¹⁰¹

Claim 1 of Gillette's patent reads as follows:

1. A safety razor blade unit comprising a guard, a cap, and a group of first, second, and third blades with parallel sharpened edges located between the guard and cap, the first blade defining a blade edge nearest the guard . . . and the third blade defining a blade edge nearest the cap . . . , said second blade defining [another] blade edge¹⁰²

On appeal, the Federal Circuit had to decide whether a four-bladed razor could infringe this claim. A divided panel held that the claim could be infringed, and therefore vacated the district court's

Problems of Plain Meaning: A Response to Aleinikoff and Shaw, 45 VAND. L. REV. 715, 738–39 (1992) (“[I]t is not inconsistent with the general thrust of a plain meaning approach that statutes would be read not as a person on the street . . . would read them, but rather as a nonspecialist lawyer would read them.”); W. Bradley Wendel, *Professionalism as Interpretation*, 99 NW. U. L. REV. 1167, 1185 (2005) (“Texts . . . must be interpreted in light of interpretive understandings of the relevant community of lawyers and judges.”).

96. 405 F.3d 1367 (Fed. Cir. 2005).

97. *See id.*

98. Complaint at 1–3, *Gillette Co. v. Energizer Holdings, Inc.*, No. Civ. A. 03-11514-PBS, 2004 WL 3366162 (D. Mass. Jan. 15, 2004).

99. Memorandum of Law in Support of Plaintiff's Motion for a Preliminary Injunction at 21, *Gillette Co. v. Energizer Holdings, Inc.*, No. Civ. A. 03-11514-PBS, 2003 WL 23886526 (D. Mass. Aug. 29, 2003).

100. *See Gillette Co. v. Energizer Holdings, Inc. (Gillette I)*, No. Civ. A. 03-11514-PBS, 2004 WL 3366162, at *1 (D. Mass. Jan. 15, 2004), *vacated*, 405 F.3d 1367 (Fed. Cir. 2005).

101. *Gillette*, 2004 WL 3366162, at *2.

102. U.S. Patent No. 6,212,777, col.4 ll.5–15 (issued Apr. 10, 2001) (emphasis omitted).

denial of a preliminary injunction.¹⁰³ In dissent, Senior Judge Archer criticized the majority for “exalt[ing] form over substance” and “elevating claiming conventions over the clear teachings of the specification.”¹⁰⁴ In his view, these teachings established that the “invention” was “a razor limited to three blades arranged” in a particular way.¹⁰⁵

In reality, both the majority and the dissent could be described as placing form over substance. Each approached claim construction as a specialized inquiry governed by legal conventions and the patent’s text, rather than by technological concerns such as the true extent of an invention’s advance over prior art. Each relied on detailed semantic arguments about the meaning of terms or phrases such as “comprising,” “group of,” “a,” “the,” and “first, second, and third.”¹⁰⁶ Neither contended that any of these terms or phrases were terms of art for ordinary artisans. Indeed, neither made any reference to the proposition that claims are to be construed from the perspective of one having ordinary skill in the art. Instead, the opinions referred at various points to the views of the “patentee” or “drafte[r],”¹⁰⁷ “a competitor,” or “[a]nyone reading” the patent.¹⁰⁸

The majority’s basic reason for finding that the claim could be infringed by a razor with more than three blades was that claim 1 of Gillette’s patent identified a “blade unit comprising . . . a group of first, second, and third blades.”¹⁰⁹ The majority noted that in patent claims, the term “comprising” generally means “including *at least*.”¹¹⁰

103. *Gillette Co. v. Energizer Holdings, Inc. (Gillette II)*, 405 F.3d 1367, 1374–75 (Fed. Cir. 2005).

104. *Id.* at 1375 (Archer, J., dissenting).

105. *Id.*

106. *See Gillette II*, 405 F.3d at 1371 (majority opinion) (“The word ‘comprising’ transitioning from the [claim] preamble to the [claim] body signals that the entire claim is presumptively open-ended.”); *id.* at 1372 (“The claim element identifying the blades likewise uses another presumptively ‘open’ claim term — ‘group of.’”); *id.* at 1373 (contrasting the meanings of “a span” and “the span”); *id.* (“The terms ‘first, second, and third’ are terms to distinguish different elements of the claim, not terms supplying a numerical limit.”); *see also id.* at 1375 (Archer, J., dissenting) (“The construction of claim 1 of the ’777 patent hinges on how the terms ‘comprising’ and ‘group of’ are construed.”); *id.* at 1377 (“The majority’s claim construction effectively replaces ‘span’ with ‘spans’; this is not what is claimed.”); *id.* at 1380 (“By using ‘the’ and the singular form of ‘blade,’ the patentee showed his invention possessed only one second blade positioned between the blade closest to the cap and the blade closest to the guard.”).

107. *See Gillette II*, 405 F.3d at 1373 (majority opinion).

108. *See id.* at 1382 (Archer, J., dissenting).

109. *See Gillette II*, 405 F.3d at 1371 (majority opinion).

110. *See id.* at 1371–72. In patent claims, the presumptive meaning of “comprising” strongly contrasts with that of “consisting of,” which generally means “including *only*.” *See CIAS, Inc. v. Alliance Gaming Corp.*, 504 F.3d 1356, 1360–61 (Fed. Cir. 2007) (stating that “‘comprising’ is well understood to mean ‘including but not limited to,’” and that “‘consisting of’ is close-ended and conveys limitation and exclusion”); MPEP, *supra* note 64, § 2111.03, at 2100-44 (stating that the “term ‘comprising’ . . . does not exclude additional, unrecited elements or method steps,” whereas the term “‘consisting of’ excludes any element, step, or ingredient not specified in the claim”). *But cf.* *Conoco, Inc. v. Energy &*

The majority also observed that the phrase “group of” also has special meaning; the USPTO instructs that an alternative phrase, “group consisting of,” should be used instead of “group of” when the patentee intends to specify all the elements of a group, rather than merely some number of group members.¹¹¹ Hence, both the term “comprising” and the “group of” language suggested that claim 1 could cover blades in addition to those explicitly described by the claim or the specification. In the majority’s view, the specification was not to the contrary: it broadly “define[d] the ‘invention’ to encompass ‘a plurality of blades,’”¹¹² and its discussion indicated only that razors with more than three blades were likely to be “less preferred,” not that they were outside the scope of the claimed invention.¹¹³ Consequently, the majority held that there was no numerical limitation on blades that precluded infringement by the four-bladed Quattro.¹¹⁴

Like the majority, Judge Archer focused on the patent’s text. He agreed that “[t]he construction of claim 1 of [Gillette’s] patent hinges on how the terms ‘comprising’ and ‘group of’ are construed.”¹¹⁵ In Judge Archer’s view, however, the specification foreclosed the majority’s interpretation because it “actually discourages, or teaches away from,” any razor having “more than two blades” unless it is “a three-bladed razor” like the one disclosed in the patent.¹¹⁶ In reaching this conclusion, Judge Archer did not ask whether an ordinary artisan would have read the specification as he did. Nor did he ask whether an ordinary artisan would have understood Gillette’s patent as teaching only a way to make a razor having precisely three blades, as opposed to a way to make razors having more than two blades.

Hence, while supposedly operating under an ordinary artisan rule, *Gillette*’s majority and dissent both approached claim construction without making any visible effort to determine how an artisan would interpret the claim. This is significant because an artisan would likely have approached the task of interpretation very differently. An artisan might have found it counter-intuitive and disconcerting for claim scope to turn on fine readings of seemingly innocuous words like “comprising” and “group of.” The artisan would more instinctively focus on questions relating to the artisan’s expertise, such as whether

Envtl. Int’l, L.C., 460 F.3d 1349, 1360 (Fed. Cir. 2006) (noting that, despite the restrictive nature of “consisting of,” use of this phrase “does not exclude additional components or steps that are unrelated to the invention”).

111. See *Gillette II*, 405 F.3d at 1372 (citing U.S. PATENT & TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 803.02, at 800-5 (8th ed., rev. 2 2004)).

112. *Id.* at 1374.

113. *Id.* at 1371; see also *id.* at 1374 (“The specification makes numerous references to a preferred embodiment of the invention with three blades. . .”).

114. *Id.* at 1372.

115. *Id.* at 1375 (Archer, J., dissenting).

116. *Id.* at 1377.

Gillette's patent described an invention that could be readily used to create a four-bladed razor. The opinions in *Gillette* thus illustrate how disconnected modern claim construction is from an artisan's likely view.

The validity of this conclusion is not affected by the Federal Circuit's en banc decision in *Phillips v. AWH Corp.*, which came after the decision in *Gillette*. Although *Phillips* may have made it more likely for a court to state explicitly that an ordinary artisan's perspective governs claim construction,¹¹⁷ *Phillips* did not reject *Gillette*'s lawyerly approach.¹¹⁸ Hence, courts continue to analyze claims and specifications primarily in terms of the linguistic cues that they provide, rather than by focusing on an artisan's perspective or actual technological fact.¹¹⁹ Claim interpretations continue to rely on precedent-informed meanings of what the uninitiated might view as relatively innocuous terms.¹²⁰ The fundamental judicial task still does not consist of showing documents to an ordinary artisan and finding out how that person interprets them, or even imaginatively reconstructing what such a procedure would produce. Instead, judges engage in careful, precedent-informed analysis of a patent and its prosecution history. This approach mimics that of an attorney trained in textual

117. See *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc) (emphasizing the role of the ordinary artisan's perspective).

118. See *Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1373 (Fed. Cir. 2007) (citing *Gillette II* for the proposition that claim limitations should not be imported from the specification); *PalmTop Productions, Inc. v. Lo-Q PLC*, 450 F. Supp. 2d 1344, 1350 (N.D. Ga. 2006) (citing *Gillette II* for the proposition that construction must focus on the claims). If anything, *Phillips* strengthened the tendency to rely on the specification in the manner discussed in Judge Archer's dissent. See *Gillette Co. v. Energizer Holdings, Inc. (Gillette III)*, No. Civ. A. 03-11514-PBS, 2005 WL 3481321, at *12 (D. Mass. Dec. 19, 2005) ("Schick is correct . . . in emphasizing that *Phillips* reaffirmed the primacy of the specification in construing claim terms."); see also *On Demand Mach. Corp. v. Ingram Indus., Inc.*, 442 F.3d 1331, 1343 (Fed. Cir. 2006) ("The high speed manufacture of a single copy is fundamental to the Ross invention, for the specification highlights that the customer may have a printed and bound copy within 'three to five minutes.'" (quoting U.S. Patent No. 5,465,213 col.2 l.32 (filed July 12, 1993))); *Nystrom v. Trex Co.*, 424 F.3d 1136, 1142 (Fed. Cir. 2005) (repeating *Phillips*' instruction that "[t]he construction that stays true to the claim language and most naturally aligns with the patent's description of the invention will be, in the end, the correct construction" (quoting *Phillips*, 415 F.3d at 1316)).

119. See *Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 807 (Fed. Cir. 2007) (asserting that the specification's discussion of "'transverse holes, each of which is . . . perpendicular' . . . implie[d] that a 'transverse' hole need not be 'perpendicular'" because, otherwise, the description of them as perpendicular would be redundant (quoting U.S. Patent No. 5,465,213 col.2 l.32 (filed July 12, 1993))); cf. *id.* at 813 (Moore, J., dissenting) ("[T]he patentee used the two words ['transverse' and 'perpendicular'] to clearly specify which of the definitions of transverse applied to his invention . . .").

120. *Intamin, Ltd. v. Magnetar Techs., Corp.*, 483 F.3d 1328, 1333 (Fed. Cir. 2007) (using the established meaning "of the word 'said' in a claim" to determine that certain magnets described by a claim had to "have at least 'alternating' polarities"); *LG Elecs., Inc. v. Bizcom Elecs., Inc.*, 453 F.3d 1364, 1372 (Fed. Cir. 2006) (citing *KCJ Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed. Cir. 2000), regarding the meaning of "a").

exegesis, rather than that of an artisan whose defining characteristic is technological expertise.

B. The Origins of Patent Law's "Person of Ordinary Skill" Measure

According to modern patent doctrine, an "ordinary artisan" perspective governs at least four different legal — i.e., judge-determined — issues in patent suits:

- (1) nonobviousness, the question of whether a claimed invention sufficiently differs from what was publicly known before;
- (2) enablement, the question of whether the patent adequately describes the claimed invention so that it can be made and used by others;
- (3) definiteness, the question of whether patent claims are sufficiently clear to give notice of what they cover; and
- (4) claim construction, the question of what patent claims literally cover.

Nonobviousness, enablement, and definiteness are all statutorily required for a patent claim to be valid. There is no valid patent right¹²¹ if a claimed invention is obvious,¹²² if a patent's disclosure of the claimed invention is not enabling,¹²³ or if a claim is too unclear to give notice of its scope.¹²⁴

The Patent Act, however, requires only that nonobviousness and enablement be governed by an ordinary artisan's perspective. The Act's nonobviousness provision states:

A patent may not be obtained . . . if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art.¹²⁵

The Act's enablement provision also refers explicitly to the ordinary artisan by stating that a patent must

121. ROGER E. SCHECHTER & JOHN R. THOMAS, INTELLECTUAL PROPERTY § 13.1, at 282 (2003) (describing the requirements of nonobviousness, enablement, and claim definiteness).

122. *See* 35 U.S.C. § 103(a) (2000).

123. *See id.* § 112 para. 1.

124. *See id.* § 112 para. 2.

125. *Id.* § 103(a).

contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same.¹²⁶

In contrast, the statutory provision requiring claims and claim definiteness — the second paragraph of § 112 of the Act — makes no reference to the ordinary artisan. It makes only a more general demand: “[t]he specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.”¹²⁷ Except for the sixth paragraph of § 112, which provides a rule of construction for means-plus-function limitations, the Act provides no instruction on how claims should be construed.¹²⁸

The Federal Circuit has filled this statutory vacuum by (1) holding that a claim is to be given “the meaning it would have to a person of ordinary skill”¹²⁹ and (2) merging the assessment of claim definiteness with the process of claim construction. The merger results from making claim definiteness a direct function of whether claims can be

126. *Id.* § 112 para. 1.

127. *Id.* § 112 para. 2.

128. *Id.* § 112 para. 6. In contrast, the European Patent Convention and its associated protocol provide some direction on how claims should be interpreted. 1 MARGARETE SINGER & DIETER STAUDER, EUROPEAN PATENT CONVENTION 236–37 (3d ed. 2003) (including the text of Article 69 and an associated protocol). These European materials, however, refer to the perspective of one of ordinary skill only in describing a mode of interpretation that they reject. *Id.* Like the United States’ Patent Act, they fail to require explicitly that the literal scope of claims be interpreted from this perspective. *Id.* Nonetheless, courts in European countries such as Germany, France, Switzerland, and the United Kingdom have invoked either the perspective or the knowledge of an ordinary artisan in determining patent scope. *See, e.g.*, INTERPRETATION OF PATENTS IN EUROPE: APPLICATION OF ARTICLE 69 EPC 58–59, 79–80, 109, 229 (Jochen Pagenberg & William R. Cornish eds., 2006); *see also* 1 SINGER & STAUDER, *supra*, at 247–55.

129. *See, e.g.*, *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1116 (Fed. Cir. 2004) (stating the rule and citing cases). The Federal Circuit further conflated the proper perspectives for determining claim meaning and nonobviousness by indicating in *Phillips v. AWH Corp.* that the claim meaning is determined according to an ordinary artisan’s perspective “at the time of the invention, i.e., as of the effective filing date of the patent application.” 415 F.3d 1303, 1313 (Fed. Cir. 2005). This statement is internally contradictory because “the time of the invention” is generally expected to precede “the effective filing date.” Moreover, because claims may be drafted or amended years after the times of invention and filing, and may be drafted or amended specifically because of events in a prosecution history that necessarily occurs after filing, the rule seems perverse on its face. Some version of the rule might make more sense if claim construction were more closely tied to questions of patent validity for which the times of invention and filing are naturally significant. In *Phillips*, however, the Federal Circuit made clear that it had “certainly not endorsed a regime in which validity analysis is a regular component of claim construction.” *Id.* at 1327.

construed: “[o]nly claims ‘not amenable to construction’ or ‘insolubly ambiguous’ are indefinite.”¹³⁰ Because of the merger, claim construction and determination of claim definiteness are naturally governed by the same perspective — that of the ordinary artisan.¹³¹

Admittedly, such extension of the Patent Act’s ordinary artisan rules has superficial appeal. All things being equal, it may be most efficient and least confusing to have a single perspective govern all legal questions relating to a given patent. Moreover, there are good reasons to have an ordinary artisan perspective govern issues such as nonobviousness and enablement.¹³² Technological progress is likely promoted by restricting the award of patents to developments that were not already obvious to ordinary artisans.¹³³ Requiring only that an invention be nonobvious to an ordinary member of the public would permit thickets of patents on developments already well within the reach of those working in the field; requiring nonobviousness to the extraordinarily talented might render patents out of reach for those ordinary workers most likely to help advance a particular art.

Likewise, patent law’s rights-for-disclosure bargain¹³⁴ is likely to be best fulfilled by an enablement standard tied to an ordinary artisan. The additional burden imposed by requiring a patent to enable completely unskilled readers to practice the invention would probably outweigh any benefits, because the unskilled would be unlikely to put such knowledge to use.¹³⁵ On the other hand, requiring only that a patent’s disclosure be enabling for experts could leave effective knowledge about the inventive idea subject to loss or oligopolistic control even after the patent expires.

130. *Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1347 (Fed. Cir. 2005).

131. See *Halliburton Energy Servs., Inc. v. M-I LLC*, No. 2007-1149, 2008 U.S. App. LEXIS 1421, at *9 (Fed. Cir. Jan. 25, 2008) (“The common thread in [a variety of] cases is that claims were held indefinite only where a person of ordinary skill in the art could not determine the bounds of the claims, i.e., the claims were insolubly ambiguous.”); *Young v. Lumenis, Inc.*, 492 F.3d 1336, 1346 (Fed. Cir. 2007) (explaining that “[i]ndefiniteness requires a determination of whether those skilled in the art would understand what is claimed,” and that, for purposes of this determination, “general principles of claim construction apply” (quoting *Datamize*, 417 F.3d at 1348)).

132. See generally Dan L. Burk & Mark A. Lemley, *Is Patent Law Technology-Specific?*, 17 *BERKELEY TECH. L.J.* 1155, 1190 (2002) (“The [ordinary artisan] approach in general represents the proper standard for patent law.”).

133. See *MERGES & DUFFY*, *supra* note 91, at 646; STEVEN SHAVELL, *FOUNDATIONS OF ECONOMIC ANALYSIS OF LAW* 152 (2004) (finding the nonobviousness requirement justified by society’s interest in “not bear[ing] the monopoly costs of patent if a product or process would probably have been created soon enough without the stimulus of patent”).

134. See *Bonito Boats v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150–51 (1989) (“The federal patent system thus embodies a carefully crafted bargain for encouraging the creation and disclosure of new, useful, and nonobvious advances in technology and design in return for the exclusive right to practice the invention for a period of years.”).

135. See *Lowell v. Lewis*, 15 F. Cas. 1018, 1020 (C.C.D. Mass. 1817) (No. 8,568) (Story, J.) (“It is not necessary, however, that the specification should contain an explanation, level with the capacities of every person (which would, perhaps, be impossible) . . .”).

Hence, an ordinary artisan perspective makes sense for the nonobviousness and enablement inquiries. If there were no substantial reason to prefer an alternate perspective for claim construction, there would be good reason to extend the Patent Act's ordinary artisan rules to claim construction and definiteness.

But there are substantial reasons to prefer an alternate perspective for claim construction. Section III.A showed that the ordinary artisan rule substantially conflicts with the subrules and practice of claim construction. Sections III.C and III.D will show that the ordinary artisan rule for claim construction lacks a strong historical pedigree and is contrary to interests in predictability, coherence, and transparency.

C. A Short History of Claims and Claim Construction

Before describing the history of claim construction, some caveats are in order. The history of claim construction's methodological development is far more complicated than has typically been suggested by brusque accounts of a late nineteenth century shift toward modern claiming. Given this complexity, the following brief account cannot be comprehensive. It does, however, convey the basis for my sense that (1) consistent description of claim construction as governed by the ordinary artisan perspective is a relatively recent phenomenon; (2) in many cases over a long period of time, courts have done well enough without such a rule; and (3) pre-Federal Circuit authority that might be cited for such a rule seems largely a vestige of a time when claim construction was not well distinguished from assessment of claim validity, a patent's social worth, or the range of infringing equivalents. In my view, these findings dispel the common notion that history somehow mandates an ordinary artisan rule for claim construction.

1. The Slow Evolution of Modern Claims and Claim Interpretation

It is commonly asserted that the end of the nineteenth century witnessed a decisive shift away from "central claiming" and toward "peripheral claiming."¹³⁶ In central claiming, claims describe or point

136. See, e.g., Burk & Lemley, *supra* note 14, at 52 (asserting that "U.S. patent law adopted [peripheral claiming] in the 1870's"); Michael J. Meurer & Craig Allen Nard, *Invention, Refinement and Patent Claim Scope: A New Perspective on the Doctrine of Equivalents*, 93 GEO. L.J. 1947, 1962 n.69 (2005) (asserting that, as of the 1870 Patent Act, "[c]entral claiming was officially dead, and the patent claim from 1870 to the present day has held center stage"); cf. John F. Duffy, *The Festo Decision and the Return of the Supreme Court to the Bar of Patents*, 2002 SUP. CT. REV. 273, 316 (asserting that, "[a]t the close of the nineteenth century, the patent-claiming revolution was largely complete").

to representative embodiments of the inventive idea.¹³⁷ In peripheral claiming, claims indicate the literal boundaries of patent rights.¹³⁸

This common account is significantly misleading. Detailed inspection of case law and claiming practices suggests that the true triumph of modern peripheral claiming occurred about one hundred years later, in the last decades of the twentieth century. Until this time, courts did not generally segregate questions of patent scope from questions of technological or social worth in the way that modern peripheral claiming requires. Thus, when courts in earlier eras invoked an ordinary artisan's perspective to assess patent scope, they did so at a time when determination of patent scope was tightly tied to more naturally artisan-oriented questions of validity and technological significance.

The lateness of peripheral claiming's triumph is consistent with the more basic fact that claims are a relatively new legal development.¹³⁹ Indeed, the patent's more general written description or "specification" largely developed in the eighteenth century, when the United Kingdom and the United States discarded traditional requirements that a patentee "work" the invention and replaced them with a requirement of disclosure that enables others to make and use the invention.¹⁴⁰ Thus, the Patent Act passed by the United States' first Congress¹⁴¹ required that a patentee provide

a specification in writing, containing a description, accompanied with drafts or models . . . [so] as not only to distinguish the invention or discovery from other things before known or used, but also to enable

137. RIDSDALE ELLIS, PATENT CLAIMS § 4, at 4 (1949) ("Central definition involves the drafting of a narrow claim setting forth a typical embodiment coupled with broad interpretation by the courts to include all equivalent constructions."); *see also* Henry E. Smith, *Intellectual Property as Property: Delineating Entitlements in Information*, 116 YALE L.J. 1742, 1807 (2007) (describing the central claiming method as one "in which the central case of the invention was specified and the boundaries were worked out ex post").

138. JANICE M. MUELLER, AN INTRODUCTION TO PATENT LAW 54 (2d ed. 2006) ("Peripheral claiming means that the claim recites a precise boundary or periphery of the patentee's property right . . .").

139. *See* Karl B. Lutz, *Evolution of the Claims of U.S. Patents* (pt. 1), 20 J. PAT. OFF. SOC'Y 134, 134 (1938) ("Prior to 1790 nothing in the nature of a claim had appeared either in British patent practice or in that of the American states."); Woodward, *supra* note 69, at 758 ("Probably the first examples of real patent claims in the modern sense were contained in the patent granted to Robert Fulton on February 9, 1811 . . .").

140. *See* Golden, *supra* note 5, at 2123 n.50; *see also* H.I. DUTTON, THE PATENT SYSTEM AND INVENTIVE ACTIVITY DURING THE INDUSTRIAL REVOLUTION 1750–1852, at 75 (1984) ("[I]n the eighteenth century, when the Law Officers found it necessary to distinguish between inventions and when it was felt necessary to encourage the diffusion of new skills among a wider community, the specification became the accepted form of disclosure." (internal footnote omitted)).

141. Act of Apr. 10, 1790, ch. 7, 1 Stat. 109 (repealed 1793).

a workman or other person skilled in the art or manufacture . . . to make, construct, or use the same, to the end that the public may have the full benefit thereof, after the expiration of the patent term.¹⁴²

Similarly, the 1793 Patent Act¹⁴³ required that a patent applicant

deliver a written description of his invention, and of the manner of using, or process of compounding the same . . . as to distinguish the same from all other things before known, and to enable any person skilled in the art or science to make, compound, and use the same.¹⁴⁴

Although neither of these statutes required separate patent claims, at least some early nineteenth century U.S. patents contained statements of what a patent applicant “claimed.” But such claims were not always illuminating.¹⁴⁵ For example, one patent issued in 1808 spoke with frank but unhelpful generality, saying, “I claim the exclusive right to the principles, and to all the machines above specified, and for all the uses and purposes specified”¹⁴⁶

More precise statements of what a patentee claimed became increasingly common as the century progressed, partly in response to judicial threats to invalidate patents lacking sufficiently clear indications of their scope.¹⁴⁷ The 1836 Patent Act¹⁴⁸ further encouraged this development by requiring that a patent applicant “particularly *specify*

142. *Id.* § 2, 1 Stat. at 110.

143. Act of Feb. 21, 1793, ch. 11, 1 Stat. 318 (repealed 1836).

144. *Id.* § 3, 1 Stat. at 321.

145. *See, e.g.*, 1 ANTHONY W. DELLER, PATENT CLAIMS § 4, at 11 (2d ed. 1971) (“At first the claims were rather imperfect and afforded little improvement.”).

146. *Evans v. Eaton*, 16 U.S. 454, 515 (1818) (internal quotation marks omitted).

147. Lutz, *supra* note 139, at 139–40 (describing court opinions requiring distinction of the invention from the prior art); Joshua D. Sarnoff, *The Historic and Modern Doctrines of Equivalents and Claiming the Future, Part I (1790–1870)*, 87 J. PAT. OFF. SOC’Y 371, 384 (2005) (“In response to [court] decisions, patent applicants began to include summary language at the end of their specifications that more specifically identified what they regarded as and claimed to be their inventions and what distinguished them from the prior art.”); Woodward, *supra* note 69, at 759 (“[T]he practice of appending statements of claim . . . became general” after courts “laid stress on the statutory requirement that the inventor distinguish his invention ‘from all other things before known.’”); *cf.* *Lowell v. Lewis*, 15 F. Cas. 1018, 1020 (C.C.D. Mass. 1817) (No. 8,568) (Story, J.) (“[U]nless it be distinctly stated, in what that invention specifically consists, it is impossible to say, whether it ought to be patented or not; and it is equally difficult to know, whether the public infringe upon or violate the exclusive right secured by the patent.”).

148. Act of July 4, 1836, ch. 357, 5 Stat. 117 (repealed 1870).

and point out the part, improvement, or combination, which he claims as his own invention or discovery.”¹⁴⁹

Still, mid-nineteenth-century claims were generally drafted and understood quite differently from claims of the present day. Early claims commonly fit the model of “central claiming,” under which claims indicated the nature of the invention by pointing to or reciting features of one or more “preferred embodiments” described by the patent’s specification.¹⁵⁰ Thus, in a case to which the modern doctrine of equivalents is often traced, the primary claim at issue read as follows:

What I claim as my invention . . . is making the body of a car for the transportation of coal, &c., in the form of a frustum of a cone, *substantially as herein described*, whereby the force exerted by the weight of the load presses equally in all directions, and does not tend to change the form thereof¹⁵¹

In this historical context, the 1870 Patent Act¹⁵² has often been characterized as a watershed. Whereas the 1836 Patent Act is commonly viewed as ambiguous regarding whether patents needed to include separate claims,¹⁵³ the 1870 Act more unequivocally demanded distinct definitions of patent scope. Section 26 required that an applicant “particularly point out and *distinctly claim*, the part, improvement, or combination which he claims as his invention or discovery”¹⁵⁴

Commentators have suggested that enactment of the 1870 Act’s more explicit language was followed by a sharp turn toward modern “peripheral claiming.”¹⁵⁵ But this suggestion is belied by the historical

149. *Id.* § 6, 5 Stat. at 119 (emphasis added).

150. MUELLER, *supra* note 138, at 54; *see also* TOSHIKO TAKENAKA, INTERPRETING PATENT CLAIMS: THE UNITED STATES, GERMANY AND JAPAN 10 (1995) (“The principle utilized [in 1853] was that a claim simply describes one form that embodies the patentee’s invention, but the scope of the patent itself covers all forms that embody the patentee’s mode of operation and produce the same new and useful result.”).

151. *Winans v. Denmead*, 56 U.S. 330, 342 (1853) (emphasis added) (internal quotation marks omitted).

152. Act of July 8, 1870, ch. 230, 16 Stat. 198 (repealed 1952).

153. *See, e.g.*, Sarnoff, *supra* note 147, at 385 (concluding that the 1836 Act’s language “did not clearly require the use of an ending summary or formal claim language”); *see also* Act of July 4, 1836, ch. 356, 5 Stat. 117 (amended 1837 and 1870). *But see* MERGES & DUFFY, *supra* note 91, at 782 (describing claiming as a “statutory requirement, first added in 1836”).

154. Act of July 8, 1870, ch. 230, § 26, 16 Stat. at 201 (emphasis added). Section 26 also recognized claims as a separate part of the patent document by providing that the “specification and claim shall be signed.” *Id.*

155. *See supra* note 136 and accompanying text.

record. Although as early as 1876 the Supreme Court declared the “distinct and formal claim” to be “of primary importance, in the effort to ascertain” patent scope,¹⁵⁶ this modern-sounding statement was at that time “on the cutting edge of the law.”¹⁵⁷ Several decades would elapse before courts, and the patent community more generally, would succeed in hammering out claims’ modern periphery-marking role.

The incomplete evolution of claim drafting¹⁵⁸ and the tendency of courts and commentators to rely on precedent reaching back to the early 1800s made a more immediate transition difficult, if not impossible. Through the end of the nineteenth century and the first half or so of the twentieth, determination of patent scope remained substantially tied to assessment of a patent’s legal validity or technological and social worth. The Patent Act itself may have been partially responsible. Prior to 1952, it grouped claiming and disclosure requirements together in a single run-on sentence.¹⁵⁹ This lack of grammatical separation was mirrored by courts’ failure to strictly distinguish questions of claim interpretation and definiteness from questions about the sufficiency of a patent’s technological disclosure.¹⁶⁰

Moreover, courts may have been even more likely to deliberately mix questions of patent scope with assessments of technological and social value. In 1911, the commentator James Hopkins attested to this phenomenon, saying, “It is manifest . . . that the first test to be applied to a given patent to determine its scope, is that of determining whether

156. *Merrill v. Yeomans*, 94 U.S. 568, 570 (1876).

157. *MERGES & DUFFY*, *supra* note 91, at 785.

158. See Giles S. Rich, *Foreword* to *CHISUM ET AL.*, *supra* note 26, at iii, v (“Th[e] language [of the Patent Act’s claiming requirement] was carried forward in 1952 from very old statutes enacted when claims were very different from what they are today.”); cf. *Reece Button-Hole Mach. Co. v. Globe Button-Hole Mach. Co.*, 61 F. 958, 960 (1st Cir. 1894) (“Specifications and claims have not yet fallen into such settled forms as to enable the courts to construe them, in any considerable part, with such certainty as they construe many words and phrases in formal instruments at the common law . . .”).

159. Section 26 of the 1870 Patent Act read as follows:

That before any inventor or discoverer shall receive a patent . . . [he] shall file . . . a written description . . . and in case of a machine, he shall explain the principle thereof, and the best mode . . . and he shall particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery

Act of July 8, 1870, ch. 230, § 26, 16 Stat. 198, 201 (repealed 1952).

160. See, e.g., *Ga.-Pac. Corp. v. U.S. Plywood Corp.*, 258 F.2d 124, 136 (2d Cir. 1958) (describing the “claims, read in light of the specifications,” as having the duty of “reasonably appris[ing] those skilled in the art both of the utilization and scope of the invention”); *George A. Ohl & Co. v. Falstrom & Tornqvist Co.*, 175 F. 67, 69 (3d Cir. 1909) (“We think the claims are so indefinite in this respect that they do not inform one skilled in the art as to the manner in which this part of the mechanism should be constructed.”); *Lutz*, *supra* note 139, at 156 (concluding that claims’ role prior to 1870 was muted because “the questions of whether the specification ‘claimed too much,’ or failed to ‘distinguish the old from the new,’ were lumped along with other questions concerning the ‘sufficiency of the specification’”).

the inventor has contributed anything to the knowledge of mankind; whether his invention is a generous contribution to a broad and important art.”¹⁶¹

The Supreme Court echoed this sentiment in 1923, stating:

In administering the patent law the court first looks into the art to find what the real merit of the alleged discovery or invention is and whether it has advanced the art substantially. If it has done so, then the court is liberal in its construction of the patent, to secure to the inventor the reward he deserves. If what he has done works only a slight step forward and that which he says is a discovery is on the border line between mere mechanical change and real invention, then his patent, if sustained, will be given a narrow scope¹⁶²

Consistent with such instruction from the high court, in 1934 Judge Learned Hand acknowledged, “No doubt the interpretation of patent claims depends more upon the advance made by the inventor than upon the words used, and in spite of protestations to the contrary, courts do at times play fast and loose with them as they do not with other formal documents.”¹⁶³ And Hand’s court, the Second Circuit, was supposedly one of the most literal-minded when it came to claim interpretation!¹⁶⁴

161. 1 JAMES LOVE HOPKINS, *THE LAW OF PATENTS AND PATENT PRACTICE IN THE PATENT OFFICE AND THE FEDERAL COURTS WITH RULES AND FORMS* § 99, at 182 (1911); *see also* WILLIAM MACOMBER, *THE FIXED LAW OF PATENTS* § 222, at 217 (1909) (“The court may resort to strict and, it may even be, to harsh construction when the patentee has done nothing more than make a trivial improvement upon a well-known structure which produces no new result . . .”); WILLIAM EDGAR SIMONDS, *A SUMMARY OF THE LAW OF PATENTS FOR USEFUL INVENTIONS WITH FORMS 233* (Fred B. Rothman & Co. 1995) (1883) (“[A]lthough a thing may come within the *terms* of a claim, yet the prior art may be such that the terms of the claim must be so narrowed by construction that the thing under inquiry may not really be an infringement . . .”).

162. *Eibel Process Co. v. Minn. & Ontario Paper Co.*, 261 U.S. 45, 63 (1923) (emphasis added).

163. *Cole v. Malleable Iron Fittings*, 70 F.2d 686, 687 (2d Cir. 1934); *cf.* *Kemart Corp. v. Printing Arts Res. Labs.*, 201 F.2d 624, 633 (9th Cir. 1953) (holding that the canon of claim differentiation was “subordinate to the controlling rule that a patentee’s broadest claim can be no broader than his actual invention”); *Gen. Motors Corp. v. Kesling*, 164 F.2d 824, 830 (8th Cir. 1947) (“Broad as is the language of these Claims, their scope depends upon the discovery revealed in the explanatory Specifications.”); *Gibbs v. Triumph Trap Co.*, 26 F.2d 312, 314 (2d Cir. 1928) (L. Hand, J.) (“Courts do indeed treat the language of claims plastically, now stretching to save the whole scope of the invention, now squeezing to limit the claim so that it can survive.”).

164. *Compare* EMERSON STRINGHAM, *OUTLINE OF PATENT LAW* § 5900, at 329 (1937) (characterizing “the Second and Sixth Circuits” as subscribing to “the literal method of determining the scope of protection”), *with id.* § 5900, at 332 (criticizing the jurisprudence

Such descriptions of claim construction — by Hopkins, the 1923 Supreme Court, and Hand — are in tension with the Supreme Court’s 1877 declaration that claim language had “primary importance” in determining patent scope.¹⁶⁵ It is no wonder, then, that nearly seventy years after passage of the 1870 Patent Act, an article in the *Journal of the Patent Office Society* reported that “[t]he controversy as to whether the claim should be taken as a literal ‘definition’ of the invention persists to this day.”¹⁶⁶

The 1952 Patent Act made changes that might have been expected to clarify the distinction between questions of patent scope and assessments of validity or value. The 1952 Act broke up the run-on sentence that had previously required both claiming and adequate disclosure, and placed these mandates in separate paragraphs of § 112.¹⁶⁷ Moreover, the 1952 Act made explicit a requirement that an invention be significant — rather than merely novel — by adding § 103, a statutory provision distinct from § 112 that incorporated the modern requirement of nonobviousness.¹⁶⁸

More than a decade after passage of the 1952 Act, however, the Supreme Court’s opinion in *United States v. Adams*¹⁶⁹ demonstrated that questions of patent scope remained entangled with assessments of validity or value. For the *Adams* court, the most fundamental question in determining patent scope was still not one of claim construction per se, but instead one of “ascertaining the invention.”¹⁷⁰ In the latter inquiry, claims and the specification apparently served only as aids to achievement of a larger end — one that encompassed determining (1) what an alleged inventor had in fact accomplished technologically and (2) what differentiated that technological accomplishment from the prior art.

The *Adams* opinion vividly illustrates the extent to which the “ascertaining the invention” approach could trump more straightforward

of “the First and Fourth, and to a less extent . . . the Third” Circuits, where “nearly the whole reliance is placed upon the feelings of the tribunal, the claim language being ignored completely or almost completely”).

165. *Merrill v. Yeomans*, 94 U.S. 568, 570 (1877); see also *supra* text accompanying note 156.

166. Karl B. Lutz, *Evolution of the Claims of U.S. Patents* (pt. 3), 20 J. PAT. OFF. SOC’Y 457, 466 (1938).

167. Compare Act of July 8, 1870, ch. 230, § 26, 16 Stat. 198, 201 (repealed 1952), with Act of July 19, 1952, ch. 950, § 112 paras. 1–2, 66 Stat. 792, 798 (amended 1965 and 1975).

168. See MERGES & DUFFY, *supra* note 91, at 616.

169. 383 U.S. 39 (1966).

170. *Id.* at 49 (“[I]t is fundamental that claims are to be construed in the light of the specifications and both are to be read with a view to ascertaining the invention . . .”). The Court similarly spoke of “constru[ing]” the “invention” in *Graham v. John Deere Co.*, 383 U.S. 1, 33 (1966) (“It is, of course, well settled that an invention is construed not only in light of the claims, but also with reference to the file wrapper or prosecution history in the Patent Office.”).

interpretation of claim language. In an early part of the opinion, the Court observed that the patent's specification disclosed an invention of significant merit:

The Adams invention was the first practical, water-activated, constant potential battery which could be fabricated and stored indefinitely without any fluid in its cells. It was activated within 30 minutes merely by adding water. Once activated, the battery continued to deliver electricity at a voltage which remained essentially constant . . . Furthermore, its capacity for generating current was exceptionally large¹⁷¹

Impressed by the patentee's technological contribution, the Court proceeded to adopt a narrow reading of the claims that favored a finding of validity. In particular, the Court held that the pertinent claims required the use of water as an electrolyte — despite the fact that those claims' actual language made absolutely no reference to any required electrolyte.¹⁷² Counterintuitively, the Court took the claims' silence as license to infer a water-as-electrolyte limitation, rather than as a signal that there were no restrictions on the kind of electrolyte that could be used.¹⁷³ The Court supported this construction by pointing to an “object[ive] of the invention” described in the specification — namely, “to provide a battery rendered serviceable by the mere addition of water.”¹⁷⁴

In a true system of peripheral claiming, such a construction might be condemned for “committ[ing] one of the cardinal sins of [modern] patent law”: importing a claim limitation “from the written description into the claims.”¹⁷⁵ Indeed, this appears to be what the Court of Appeals for the Fourth Circuit later recognized the Supreme Court to have done. In 1982, the Fourth Circuit described the *Adams* Court's approach as having “the unavoidable effect of limiting the claims by the specifications.”¹⁷⁶ Thus, *Adams* illustrates how courts' focus on

171. *Adams*, 383 U.S. at 43.

172. *Id.* at 49.

173. *Id.* at 48 (“It is true that Claims 1 and 10, *supra*, do not mention a water electrolyte, but, as we have noted, a stated object of the invention was to provide a battery rendered serviceable by the mere addition of water.”).

174. *Id.*

175. *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1340 (2001); *see also Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (en banc) (stating that “the purpose underlying [a particular] line of cases — to avoid the danger of reading limitations from the specification into the claim — is sound”).

176. *Am. Original Corp. v. Jenkins Food Corp.*, 696 F.2d 1053, 1057 n.2 (4th Cir. 1982). Despite its rather heterodox nature, *Adams* has been and continues to be cited for its teach-

ascertaining the true nature of a disclosed invention can, and until quite recently did, constrain the significance of claim language in a way substantially opposed to modern conceptions of peripheral claiming.

Courts' persistence in determining patent scope in a manner better described as "patent construction"¹⁷⁷ than as "claim construction" might seem remarkable until it is recognized that the former approach was commonly demanded by the language of claims. Before courts could consistently construe claims "peripherally," claims had to be drafted to lend themselves to such construction. As the following discussion shows, it took decades for patent applicants and practitioners to shift toward consistent drafting of claims that could be plausibly viewed as freestanding *delimiters* of patent scope. Until relatively recently, claims were regularly drafted to serve as little more than *pointers* that highlighted relevant aspects of the patented invention but also relied on the more detailed written description to provide limitations not apparent from the claims themselves.¹⁷⁸ This longstanding practice had support in the Patent Act itself, which to this day requires that claims "point[] out" the asserted invention.¹⁷⁹

At least in part, such conservatism in claim drafting may have resulted from fear that claims not closely tied to the specification's detailed disclosure would be found invalid. In the latter half of the nineteenth century, many claims appear to have been consciously drafted in the shadow of cases such as *O'Reilly v. Morse*.¹⁸⁰ In this 1854 case, the Supreme Court held invalid, as overbroad, a claim seeking to cover devices far removed from the telegraph more specifi-

ings on claim construction. See, e.g., *Phillips*, 415 F.3d at 1316 (including a parenthetical with *Adams*' "ascertaining the invention" language).

177. See, e.g., *Consolidated Elec. Light Co. v. McKeesport Light Co.*, 159 U.S. 465, 476 (1895) (refusing to make "a construction of [the] patent" that "would exclude competitors from making use of any fibrous or textile material"); *Weidman Metal Masters Co. v. Glass Master Corp.*, 623 F.2d 1024, 1030 (5th Cir. 1980) ("As we construe the patent, its crucial teaching was the relationship between the support roller and the knife blade . . ."); 40 AM. JUR. *Patents* § 122, at 614 (1942) (speaking of the "construction of patents"); 1 HOPKINS, *supra* note 161, § 96, at 179 (speaking of the "construction of letters patent").

178. Mueller, *supra* note 28, at 502–04.

179. See 35 U.S.C. § 112 para. 2 (2000); see also Act of July 8, 1870, ch. 230, § 26, 16 Stat. 198, 201 (repealed 1952) (requiring a patent applicant to "particularly point out and distinctly claim the part, improvement, or combination which he claims as his invention or discovery"); Act of July 4, 1836, ch. 357, § 6, 5 Stat. 117, 119 (repealed 1870) (requiring a patent applicant to "particularly specify and point out the part, improvement, or combination which he claims as his own invention or discovery"); 1 DELLER, *supra* note 145, § 4, at 8–9 ("These claims [in the period from 1836 to 1870] . . . served merely to call attention to what the inventor considered the salient features of his invention. The drawings and description were the main thing, the claims a mere adjunct thereto."); Lutz, *supra* note 166, at 467 ("Toward the end of the [1836 to 1870] period applicants came to feel that if they merely pointed out the *parts* in which the invention resided, the courts would give the patent its proper scope on the questions of validity and infringement.").

180. 56 U.S. 62 (1854).

cally described by Morse's patent.¹⁸¹ For decades afterwards, claim drafters appear to have responded to overbreadth concerns by writing claims that explicitly directed the reader to the specification to fill out the claims' meaning.¹⁸²

One way that late nineteenth century claims directed readers to the specification was the recitation of reference characters — specific numbers or letters used to identify parts in a patent's illustrative drawings. Since at least 1869, Patent Office rules encouraged this practice by providing the following examples of claims:

I claim as my invention:

First — The combination of the cutters E E, and the feeding Rollers I I and J J, substantially as and for the purpose hereinbefore set forth.

Second — The combination with the cutters E E, and feeding rollers I I and J J of the cutters L and M, substantially as and for the purpose hereinbefore set forth.¹⁸³

Although the Office omitted such characters from the model claim in its 1875 rulebook,¹⁸⁴ use of reference characters persisted long after passage of the 1870 Act. According to one commentator, 82% of the claims in patents issued in 1880 included reference characters,¹⁸⁵ and they still appeared in 22% of the claims issued in 1900.¹⁸⁶

Even after the use of reference characters began to decline, claims continued to refer explicitly, albeit less specifically, to a patent's more detailed disclosure. In particular, claims commonly restricted claim scope by stating that recited elements should be understood to be

181. *Id.* at 118–20. The claim in question expressly disclaimed restriction to such disclosed embodiments, stating that it was not “limit[ed] . . . to the specific machinery or parts of machinery described in the foregoing specification and claims,” but instead covered “the use of . . . electro-magnetism, however developed for marking or printing intelligible characters, signs, or letters, at any distances.” *Id.* at 112–13.

182. *See, e.g.*, 40 AM. JUR. *Patents* § 97, at 596 (1942) (“A claim may be so drawn as in effect to make the specification an essential part of it. The words ‘substantially as set forth’ in a claim import into the claim the particulars of the specification.” (internal footnote omitted)).

183. Lutz, *supra* note 166, at 466 (quoting an edition of the rules published August 1, 1869).

184. *Id.* at 487.

185. ELLIS, *supra* note 137, § 6, at 7 (reporting that the percentage of issued claims containing reference characters to be 73% in 1860, 82% in 1880, 22% in 1900, and 0% in both 1920 and 1940); *see also, e.g.*, *McClain v. Ortmyer*, 141 U.S. 419, 421 (1891) (construing a claim issued in 1882 that read, in full, “1. As attachments to a sweat or other horse-collar pad, the elastic springs *s s*, substantially as described and for the purposes set forth”).

186. ELLIS, *supra* note 137, § 6, at 7.

“substantially as described” in the written description.¹⁸⁷ From 1836 to 1875, the Patent Office’s model claims employed such “as described” or “as set forth” language.¹⁸⁸ Further, even though in 1902 the Patent Office criticized such language for its potential vagueness,¹⁸⁹ its use persisted well into the twentieth century.¹⁹⁰

Another type of claim language referring to the specification persists to this day. Section 112 of the Patent Act explicitly permits a claim limitation to be written in “means-plus-function” form¹⁹¹ — for example, by describing a claim element as “a means for doing *X*” where “doing *X*” is a function such as “transmitting motion.”¹⁹² Such limitations have long been held to encompass not every such means, but only those means specifically disclosed in the written description, as well as their technological equivalents.¹⁹³ Determining the scope of such a limitation required a form of technology assessment; courts interpreted the “means” limitation as requiring those aspects, but only those aspects, of the disclosed means that were necessary either to carry out the recited function¹⁹⁴ or to establish patentability over prior art.¹⁹⁵

187. See, e.g., *Sanitary Refrigerator Co. v. Winters*, 280 U.S. 30, 37–38 (1929) (construing claims ending with the phrases “substantially as and for the purposes described” or “substantially as described”); *MERGES & DUFFY*, *supra* note 91, at 787 (observing that “the phrase ‘substantially as described’ . . . was a common way to conclude claims in the nineteenth century”).

188. See *Lutz*, *supra* note 166, at 464, 466, 487.

189. See *Ex parte Shepler*, 1903 Dec. Comm’r Pat. 17, 19 (Comm’r Pat. 1902) (criticizing such language for helping “to conceal the scope of the claim”).

190. See *STEDMAN*, *supra* note 90, § 122, at 280 (“Frequently the claim contains a general clause referring to the description in the specification, such as ‘substantially as described’ or a clause equivalent thereto, and in such cases the description is taken to be part of the claim.”). As late as 1929, commentary suggested that, even when not explicitly used, such qualifying language was “implied in all claims” — at least when claims might otherwise be deemed vague or overly broad. See 48 C.J. *Patents* § 351, at 225 (1929) (stating that the words “substantially as described” are “implied in all claims” and “limit the claim if necessary to sustain it or to cover the real invention”); 1 *HOPKINS*, *supra* note 161, § 135, at 212 (asserting that phrases such as “substantially as described” are “superfluous, because, if they are not expressed they are implied, when that implication is necessary to sustain the claim . . .”).

191. See 35 U.S.C. § 112 para. 6 (2000).

192. JOHN F. ROBB, *PATENT ESSENTIALS FOR THE EXECUTIVE, ENGINEER, LAWYER AND INVENTOR* 157 (1922) (providing as an example claim “3. In combination, a driving element, a driven element and means for transmitting motion in reverse directions to the driven element from the driving element”).

193. See, e.g., *Grubman Eng’g & Mfg. Co. v. Goldberger*, 47 F.2d 151, 152 (2d Cir. 1931) (L. Hand, J.) (stating “a word by word correspondence is not alone enough [to determine claim scope]” and that a court must determine “how far the [specification’s disclosed] means . . . correspond to those used” (discussing U.S. Patent No. Re. 16,433, at 5, 8 (reissued Sept. 28, 1926))); *MACOMBER*, *supra* note 161, at 15 (“[W]e must first translate the ‘means’ into the specific element or combination disclosed in the specification or drawing, and then, and then only, if it be permissible, apply the doctrine of equivalents.”).

194. See, e.g., *STEDMAN*, *supra* note 90, § 119, at 274 (“[W]hen a claim . . . only declares, as it properly may, that the combination is made up of so much of the described

Thus, until quite recently, the nature of claim language and the rules of claim construction commonly required courts to determine patent scope through a technologically substantive inquiry involving consideration of what was necessary to distinguish prior art or which aspects of disclosed embodiments were “essential.”¹⁹⁶ Such an inquiry recalled both central claiming and the even earlier practice of identifying “the ‘principle’ or ‘essence’ of the invention,” which had dominated patent scope determinations in days when patents often lacked claims entirely.¹⁹⁷

Moreover, this inquiry into the distinctive or “essential” aspects of the invention dovetailed with a persistent belief that technological equivalence between an accused product or process and the patentee’s invention was the fundamental, rather than merely residual, test for infringement.¹⁹⁸ Until recently, courts and commentators did not consistently distinguish between determination of claims’ literal scope — a process today characterized as “claim construction” — and determination of a claimed invention’s equivalents, a process currently characterized as part of the infringement inquiry.¹⁹⁹ Courts often

machinery as effects a particular result, it is a question of fact which of the described parts are essential to produce that result . . .”).

195. *See, e.g.*, *Carl Braun, Inc. v. Kendall-Lamar Corp.*, 116 F.2d 663, 665 (2d Cir. 1941) (“Where general language is used in a claim it is always to be read as limited by what is new as a patentable advance as shown by the specifications.”).

196. *See, e.g.*, *Boyden Power-Brake Co. v. Westinghouse*, 170 U.S. 537, 558 (1898) (stating that the phrase “substantially as set forth” had “been uniformly held by us to import into the claim the particulars of the specification,” but also indicating that the relevant details were to be only “the essential and substantial features of the means therein illustrated”); *Wright v. Yuengling*, 155 U.S. 47, 51 (1894) (holding that “a mere difference in detail of construction” was not “a material departure”); *Crown Cork & Seal Co. v. Aluminum Stopper Co.*, 108 F. 845, 866 (4th Cir. 1901) (“The court will look . . . to see . . . whether the defendants’ device contains the material features of the patent in suit . . .”); *Nat’l Hollow Brake-Beam Co. v. Interchangeable Brake-Beam Co.*, 106 F. 693, 715 (8th Cir. 1901) (“A reference in a claim to a letter or figure used in the drawing and in the specification . . . does not limit the claim to the specific form of that element there shown, unless that particular form was essential to, or embodied the principle of, the improvement claimed.”); *Reece Button-Hole Mach. Co. v. Globe Button-hole Mach. Co.*, 61 F. 958, 960–61 (1st Cir. 1894) (“[W]ords which relate to what may be held nonessentials, however much multiplied, shall not be permitted unnecessarily to control the sense.”); *cf.* *MERGES & DUFFY, supra* note 91, at 825–26 (describing how Judge Learned Hand interpreted the scope of claim language in a patent issued to the Wright brothers by “first . . . understand[ing] the Wrights’ contribution to the art and how their invention fits into the overall sweep of the aviation field”).

197. Christopher A. Cotropia, *Patent Claim Interpretation and Information Costs*, 9 LEWIS & CLARK L. REV. 57, 73 (2005).

198. *See* *MERGES & DUFFY, supra* note 91, at 801 (“[I]n 1952, Congress would not have thought it was imposing an especially narrow rule of construction for claims containing means-plus-function limitations.”); *cf. id.* at 853 (“[T]he tests and rules that are today viewed as predecessors of the doctrine of equivalents were, in the early [nineteenth] century, the *only* standards existing to determine infringement.”).

199. *See id.*

interpreted claims to include their equivalents.²⁰⁰ Further, until the last few decades of the twentieth century, courts and commentators portrayed the primary test for infringement as one of whether the accused product or process was *at least equivalent* to what was literally claimed.²⁰¹ Thus, what would now be termed the “reverse doctrine of equivalents”²⁰² was central, rather than peripheral, to any infringement inquiry. Given such a historical context, it is unsurprising that as late as 1971, the Fifth Circuit declared that “[p]atent construction is seldom a matter of pure literalism but involves inquiry into ‘means, operation, and result.’”²⁰³

Nonetheless, times were changing. The 1970s may mark a true breakpoint, with courts finally developing strong tendencies to distinguish questions of equivalence, assessment of an invention’s merit, and claim construction²⁰⁴ in both patentee-favorable²⁰⁵ and patentee-

200. See, e.g., *Benbow-Brammer Mfg. Co. v. Straus*, 166 F. 114, 116 (2d Cir. 1908) (“We think the claim should be given an interpretation liberal enough to protect the inventor from the use of machines which differ only in nonessential changes which any skilled mechanic would know enough to make.”); *SIMONDS*, *supra* note 161, at 237–38 (“[I]n attempting to settle the question whether a thing infringes a claim of the patent one important question is whether or not it comes within the terms of the claim, (understanding the words ‘or its equivalent’ to be inserted after the mention of each part)”); *STEDMAN*, *supra* note 90, § 118, at 271 (“[T]he patentee, having described his invention, and shown its principles, and claimed it in the form which most perfectly embodies it, is, in contemplation of law, deemed to claim every form in which his invention may be copied”).

201. See *Harrington Mfg. Co. v. White*, 475 F.2d 788, 796 (5th Cir. 1973) (“A patent is infringed only if there is substantial identity between the accused device and the patented invention as to means, operation, and result.”); *Scherbatskoy v. U.S. Steel Corp.*, 287 F.2d 552, 558 (7th Cir. 1961) (“[M]ere application of claim phraseology is not alone enough to establish infringement, nor is similarity of result. There must be real identity of means, operation and result.” (quoting *Indep. Pneumatic Tool Co. v. Chi. Pneumatic Tool Co.*, 194 F.2d 945, 947 (7th Cir. 1952))); 40 AM. JUR. *Patents* § 155, at 642 (indicating that “adoption of the substance of the thing” was sufficient to show infringement); cf. *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 399–400 (Ct. Cl. 1967) (“[C]laims must not only read literally on the accused structures, but also the structures must ‘do the same work, in substantially the same way, and accomplish substantially the same result.’” (quoting *Dominion Magnesium Ltd. v. United States*, 320 F.2d 388, 396 (Ct. Cl. 1963))); 1 *DELLER*, *supra* note 145, at § 11, at 18 (“[F]or a decree of infringement under the peripheral system [of claiming] there are two prerequisites: (1) The claim must read in terms on the alleged infringing structure. (2) The alleged infringing structure must be the equivalent of that disclosed by the patentee.”); *Lutz*, *supra* note 166, at 473 (“Walker writing in 1886 devoted his chapter on infringement largely to a discussion of ‘equivalency.’”).

202. *MUELLER*, *supra* note 138, at 296 (“The reverse doctrine of equivalents . . . absolves an accused infringer from infringement liability where the accused device, although literally falling within the scope of the asserted patent claim, is so far changed in principle from the claimed invention that a finding of liability cannot be justified as a policy matter.”).

203. *Hobbs v. U.S. Atomic Energy Comm’n*, 451 F.2d 849, 867 (5th Cir. 1971).

204. See, e.g., *Black & Decker Mfg. Co. v. Sears, Roebuck & Co.*, 679 F.2d 1101, 1102 (4th Cir. 1982) (per curiam) (“‘It is fundamental that claims of a patent are to be construed in a [sic] light of the specification . . . with a view to ascertaining the invention.’ It is implicit [that] the specifications should be considered only for the purposes of interpreting what is already stated in the claims.” (quoting *United States v. Adams*, 383 U.S. 39, 49 (1966))); *Deere & Co. v. Int’l Harvester Co.*, 658 F.2d 1137, 1142 (7th Cir. 1981) (stating

unfavorable²⁰⁶ opinions. This trend toward a purer claim construction approach was likely reinforced, if not partly spurred, by the reemergence of the jury trial as a dominant mode for conducting patent suits.²⁰⁷ Jury trials required judges to distinguish between legal, judge-decided questions like claim construction and factual, jury-decided questions like equivalence. The creation of the Federal Circuit in the early 1980s provided a further institutional impetus for making clearer and more uniform distinctions between issues of validity, claim construction, and equivalence.²⁰⁸

What is the significance of this evolutionary history for present purposes? An initial point is that history casts doubt on the value of

that, for infringement purposes, “it is the claim and not the preferred embodiment which is to be used for comparison”); *Studiengesellschaft Kohle mbH v. Eastman Kodak Co.*, 616 F.2d 1315, 1324 (5th Cir. 1980) (“After the court has articulated the scope of the patent by construing it, . . . [the court] may use two analytical techniques, literal infringement and the doctrine of equivalents.”); *Paeco, Inc. v. Applied Moldings, Inc.*, 562 F.2d 870, 874 (3d Cir. 1977) (“Where the language of a patent claim is clear, the court need not — and may not — go beyond the claim to the specification.”); *Maclaren v. B-I-W Group Inc.*, 535 F.2d 1367, 1372 (2d Cir. 1976) (“It is a fundamental rule of patent law that the scope of protection granted by a patent is defined by the language of its claims rather than by its title, specifications, exhibits or by the commercial embodiments of the claimed invention.”); *Andis Clipper Co. v. Oster Corp.*, 481 F. Supp. 1360, 1377 (E.D. Wis. 1979) (declaring it “impermissible in defense of a patent to read into the specifications or claims of the patent structures or uses that may inhere in the embodiment of the patent or the uses of that embodiment but which are not in fact in the language of the claim or claims in issue.”); *Certain Thermometer Sheath Packages*, 205 U.S.P.Q. (BNA) 932, 940 (U.S. Int’l Trade Comm’n 1979) (“Identifying an ‘essence’ of an invention . . . cannot substitute for close adherence to the claims when determining their meaning.”). *But see Weidman Metal Masters Co. v. Glass Master Corp.*, 623 F.2d 1024, 1030 (5th Cir. 1980) (“Decision of an infringement claim requires a court to look at the heart of the invention. If it is appropriated, the patent is infringed.”).

205. *See, e.g., Deere*, 658 F.2d at 1142 (“The IH 800 is different only from the preferred embodiment of the 110 Patent, not from the invention patented.”).

206. *See, e.g., Maclaren*, 535 F.2d at 1376 (“[B]ecause Maclaren broadened his claim language beyond application to strollers and collapsible chairs, his invention properly is subject to comparison with the broad range of prior art which relates to collapsible support assemblies in general.”). The Supreme Court’s decision in *Gottschalk v. Benson*, 409 U.S. 63 (1972), appears, at least implicitly, to have fit this description. In *Benson*, the court rejected the patentee’s efforts to have read into claims for a “method of converting signals,” *id.* at 73, or a “data processing method,” *id.* at 74, a requirement that the claimed method be “performed in an electrical data processing apparatus.” MERGES & DUFFY, *supra* note 91, at 136–37 (quoting respondents’ brief in *Benson*). The court then held the process claims at issue invalid for lack of patentable subject matter, on the ground that they were “abstract and sweeping,” and could “be performed through any existing machinery or future-devised machinery or without any apparatus.” *Benson*, 409 U.S. at 68.

207. *See* Kimberly A. Moore, *Judges, Juries, and Patent Cases — An Empirical Peek Inside the Black Box*, 99 MICH. L. REV. 365, 366 (2000) (chronicling the increase in the use of juries in patent cases from 2.8% during the years 1968 through 1970, to 59% during the years 1997 through 1999).

208. *Cf.* Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1, 8 (1989) (“The decisions of the CAFC to date demonstrate that the court has taken seriously the duty to make the law precise, and has made strides in that direction.”).

decades-old decisions as support for the proposition that claims should be construed from the perspective of an ordinary artisan. The protracted historical mixing of patent construction questions with those of validity, merit, and equivalence provided fertile ground for assertions that a technology-centered, rather than a law-centered, perspective should govern determinations of claim scope. Once, as is the case today,²⁰⁹ questions of claim scope have been substantially separated from those of validity, merit, and equivalence, these past assertions lose much of their force. The fact that historical citations may provide some support for an ordinary artisan rule is little reason for that rule to govern today.²¹⁰ This is particularly true given that, historically, case law and commentary on claim construction have been replete with such a *mélange* of conflicting canons that one can find *some* historical support for almost any interpretive methodology.²¹¹

209. See, e.g., *Saunders Group, Inc. v. Comfortrac, Inc.*, 492 F.3d 1326, 1335 (Fed. Cir. 2007) (holding that the district court's "validity analysis cannot be used as a basis for adopting a narrow construction" even though the interpretive issue was difficult); see also *Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21 (1997) ("Under [the doctrine of equivalents], a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention."). At least one commentator has recently argued for narrowing the gap between claim construction and questions of adequate disclosure, while noting that "such a shift could place more pressure on the doctrine of equivalents to provide adequate patent protection." Holbrook, *supra* note 69, at 158–59.

210. See, e.g., *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 233 (1942) ("The clearest exposition of the significance which the terms employed in the claims had for those skilled in the art was given by the testimony of Weigand, one of the patentees . . ."); *Philip v. Mayer, Rothkopf Indus., Inc.*, 635 F.2d 1056, 1061 (2d Cir. 1980) (reporting the result of "reviewing the claims in the light of the specifications, . . . as would be done by a reader skilled in the art"); *Briggs v. M&J Diesel Locomotive Filter Corp.*, 342 F.2d 573, 578 (7th Cir. 1965) ("We have had occasion to observe that patent claims and specifications are addressed to those skilled in the art."); *Cleveland Punch & Shear Works Co. v. E.W. Bliss Co.*, 145 F.2d 991, 996 (6th Cir. 1944) ("The claim is addressed to those skilled in the art . . ."); *In re Voss*, 557 F.2d 812, 818 (C.C.P.A. 1977) (declaring previous fact findings to be "strongly probative of what one of ordinary skill in the art . . . would have understood" claim language to mean); *Yosemite Chem. Co. v. United States*, 360 F.2d 948, 952 (Ct. Cl. 1966) ("[T]he claims, by themselves, or as read in light of the specification, may be readily comprehended by those skilled in the art . . ."); Granville M. Pine, *Claim Interpretation and Patent Construction*, in *ENCYCLOPEDIA OF PATENT PRACTICE AND INVENTION MANAGEMENT* 142, 145 (Robert Calvert ed., 1964) ("The patent claims are to be read in the light of the specification . . . and are to be construed as one skilled in the art would do from a reading of the entire patent.").

211. See, e.g., *Doble Eng'g Co. v. Leeds & Northrup Co.*, 134 F.2d 78, 84 (1st Cir. 1943) ("[N]umerous overlapping and sometimes conflicting canons of construction and the exceptions thereto shed only an illusion of light upon, and so only add confusion to, the exceedingly difficult question of the meaning of a patent."); 48 C.J. *Patents* § 350, at 225 (1929) ("It has been asserted without qualification that an essential element described and shown in the specifications and drawings may be read into a claim . . . It has also been asserted that this cannot be done."); STRINGHAM, *supra* note 164, § 5900, at 328–29 (contrasting different circuit court approaches). One early nineteenth-century commentator even *celebrated* what might have been thought to be a Llewellynian nightmare of contrary canons, saying

2. Historical Alternatives to the Artisan Perspective

There is a second significant point to be drawn from claim construction's history. Although past determinations of patent scope were frequently inseparable from technology assessment, courts appear to have rarely invoked the supposed "historic rule that claims are addressed to those skilled in the art."²¹² Much historical case law and commentary, including the Supreme Court's "ascertaining the invention" discussion in *United States v. Adams*,²¹³ makes no reference to this perspective in claim construction.²¹⁴ Instead, past case law and commentary more commonly assert that claim construction should be faithful to the intent of the parties.²¹⁵ This proposition complemented

that, "while the claim may not be twisted like a wax nose, the rules for construction *may be*," and that "it is only when one follows the methods of such master minds as have been able to rise above fitting the facts to a rule, mastered the facts, decided the question in the quiet of their own consciences, and then, perhaps, found a rule to ornament their wisdom, that justice is done." MACOMBER *supra* note 161, at 15, 31. At least one modern commentator shares such an interest in permitting "rough justice" in claim construction. See Andrew B. Dzegeuze, *Did Markman and Phillips Answer the Right Question? A Review of the Fractured State of Claim Construction Law and the Potential Use of Equity to Unify It*, 15 TEX. INTELL. PROP. L.J. 457, 458–59 (2007).

212. Altman et al., *supra* note 26, at 106.

213. 383 U.S. at 48–49.

214. See, e.g., *Graham v. John Deere Co.*, 383 U.S. 1, 33 (1966) (describing how claims "must be read and interpreted with reference to rejected [claims] and to the state of the prior art"); *Exhibit Supply Co. v. Ace Patents Corp.*, 315 U.S. 126, 134 (1942) (construing the word "embedded" based on a "dictionary definition" and "its context of claim and specifications"); *Schriber-Schroth Co. v. Cleveland Trust Co.*, 311 U.S. 211, 217–23 (1940) (interpreting claims with reference to the specification and prosecution history); *Smith v. Snow*, 294 U.S. 1, 14 (1935) (construing a claim in "light both of scientific fact" and the specification); *Motion Picture Patents Co. v. Universal Film Mfg. Co.*, 243 U.S. 502, 510 (1917) (describing a patent's scope as "limited to the invention described in the claims contained in it, read in the light of the specification"); *Wright v. Yuengling*, 155 U.S. 47, 49–52 (1894) (using the specification in claim construction); *Keystone Bridge Co. v. Phoenix Iron Co.*, 95 U.S. 274, 275–78 (1877) (same); *Merrill v. Yeomans*, 94 U.S. 568, 571 (1876) (same); *Am. Original Corp. v. Jenkins Food Corp.*, 696 F.2d 1053, 1056–58 (4th Cir. 1982) (same); *Arco Indus. Corp. v. Chemcast Corp.*, 633 F.2d 435, 439–40 (6th Cir. 1980) (construing claim language in light of the specification and prosecution history); *Super Prods. Corp. v. D P Way Corp.*, 546 F.2d 748, 756 (7th Cir. 1976) (stating that claim language "must be read in light of the specification and the file wrapper"); *Maclaren v. B-I-W Group Inc.*, 535 F.2d 1367, 1373 (2d Cir. 1976) (stating that "claims are to be construed in light of the specifications"); *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 397–99 (Ct. Cl. 1967) (describing construction of claims in light of the specification and prosecution history); C.H. BIESTERFELD, *PATENT LAW FOR LAWYERS, STUDENTS, CHEMISTS, AND ENGINEERS* 151 (2d ed. 1949) ("Patent claims are construed according to their tenor, i.e., literally."); ELLIS, *supra* note 137, § 28, at 30 (discussing the presumption that claim terms have "their ordinary dictionary meaning"); STEDMAN, *supra* note 90, §§ 119–25, at 272–300 (discussing principles of claim construction); STRINGHAM, *supra* note 164, §§ 5800–80, at 322–27 (discussing factors in claim construction such as the "prior art, descriptive portion and drawing of the patent in suit, and changes made in claims during the office proceedings"); 40 AM. JUR. *Patents* §§ 96–97, 122–28, at 594–96, 614–18 (1942) (discussing claim construction).

215. See, e.g., *Evans v. Eaton*, 16 U.S. (3 Wheat.) 454, 506 (1818) (Marshall, C.J.) ("The intention of the parties, if that intention can be collected from sources which the principles

two aspects of past practice: (1) the traditional view that patents were at least substantially analogous to contracts²¹⁶ and (2) historical assertions by courts and commentators that “in case of doubt,” patents, or at least those patents deemed to disclose valuable contributions, should be construed in favor of the patentee.²¹⁷

It was recognized, of course, that an artisan’s knowledge could inform claim construction in accordance with specific rules requiring technology-related inquiries — including the rule that claims should be construed so as to be valid over the prior art²¹⁸ and the rule that extrinsic evidence, such as expert testimony, may be used to prove the

of law permit us to explore, are entitled to great consideration.”); *Technitrol, Inc. v. Control Data Corp.*, 550 F.2d 992, 997 (4th Cir. 1977) (“Since letters patent are contracts, they should be construed with the interest of the parties in mind to give effect to their legitimate expectations.”); *Laitram Corp. v. Deepsouth Packing Co.*, 443 F.2d 928, 933 (5th Cir. 1971) (“[A] patent is to be construed as a contract, with the intent of the parties as the lodestar.”); *O.H. Jewell Filter Co. v. Jackson*, 140 F. 340, 343 (8th Cir. 1905) (“The great desideratum here, as [with contracts], is to ascertain and give effect to the intention of the parties to the contract when they made it.”); 4 ANTHONY WILLIAM DELLER, *DELLER’S WALKER ON PATENTS* § 225, at 66 (2d ed. 1965) (“Since letters patent are contracts between the United States and the patentee, they should, like other contracts, be construed as a whole . . . to ascertain the actual intent of the parties to the contract.”); *STEDMAN*, *supra* note 90, § 119, at 271–72 (“While the construction must depend on the words of the instrument, yet where they are ambiguous the intention of the parties is entitled to great consideration.”).

216. See *Doble Eng’g Co. v. Leeds & Northrup Co.*, 134 F.2d 78, 84 (1st Cir. 1943) (concluding that, because patents “are bilateral instruments,” the rules for contract construction apply and the court must therefore “determine first what a patentee intended” and then what “the patent office intended”); GEORGE TICKNOR CURTIS, *A TREATISE ON THE LAW OF PATENTS FOR USEFUL INVENTIONS* xxxv (rev. 3d ed. 1867) (“The truth is, a patent should be construed as, what it really is, in substance, namely, a contract or bargain between the patentee and the public, upon those points which involve the rights and interests of either party.”); 48 C.J. *Patents* § 335, at 213 (1929) (“A patent is subject to the same general rules of construction that apply to other contracts.”); 1 HOPKINS, *supra* note 161, § 96, at 179 (“Letters Patent are contracts.”).

217. 1 DELLER, *supra* note 145, § 21, at 41 (“Construction is to be favorable to the patentee, in case of doubt.”); see also *Smith v. Snow*, 294 U.S. 1, 14 (1935) (“If the matter were doubtful, it is plain from what has been said that the character of the patent and its commercial and practical success are such as to entitle the inventor to broad claims and to a liberal construction of those which he has made.”); *Klein v. Russell*, 86 U.S. 433, 466 (1873) (“The court should proceed in a liberal spirit, so as to sustain the patent and the construction claimed by the patentee himself, if this can be done consistently with the language which he has employed.”); *Ortho Pharm. Corp. v. Am. Hosp. Supply Corp.*, 534 F.2d 89, 94 (7th Cir. 1976) (“[T]he claims of a patentee should be interpreted liberally so as to uphold and not destroy his right in the substance of his invention.”); *STEDMAN*, *supra* note 90, § 119, at 272–73 (“In construing a patent courts should proceed in a liberal spirit, so as to sustain the construction claimed by the patentee”); 40 AM. JUR. *Patents* § 122, at 614 (1942) (“[T]he court will ordinarily adopt a construction which is favorable to the patentee.”); 48 C.J. *Patents* § 336, at 213–14 (1929) (“Patents are to be liberally construed so as to secure to the inventor the real invention which he intends to secure”).

218. See 40 AM. JUR. *Patents* § 128, at 617 (1942) (“Limitations will be put upon claims and specifications in view of prior inventions and the pre-existing state of the art.” (internal footnotes omitted)).

special meaning of a term of art.²¹⁹ Consistent with this understanding, the Court of Customs and Patent Appeals (“CCPA”) stated that “[c]laim language must be read in light of the specification as it would be interpreted by one of ordinary skill in the art.”²²⁰ This formulation, which the courts still apply to USPTO interpretations of claims,²²¹ retained a role for the ordinary artisan but also suggested that this role was a subsidiary one: to explain the meaning of the patent’s technological disclosure, not to interpret the claims themselves.²²²

These limited roles for artisans, as experts on technology and terms of art, resonate with the roles for experts described by the Supreme Court as early as 1858. The Court first explained how use of expert testimony should be restricted:

Experts may be examined to explain terms of art, and the state of the art, at any given time. They may explain to the court and jury the machines, models, or drawings, exhibited. . . . The maxim of ‘*cuique in sua arte credendum*’²²³ permits them to be examined

219. *U.S. Indus. Chems., Inc. v. Carbide & Carbon Chems. Corp.*, 315 U.S. 668, 678 (1942) (“[I]t is permissible, and often necessary, to receive expert evidence to ascertain the meaning of a technical or scientific term or term of art so that the court may be aided in understanding not what the instruments mean but what they actually say.”); 48 C.J. *Patents* § 346, at 220 (1929) (“It is only where a court requires the explanation of technical terms or the language of any particular art to enable it to understand the specification of a patent that the testimony of those expert in the art is pertinent.”).

220. *E.g.*, *In re Johnson*, 558 F.2d 1008, 1016 (C.C.P.A. 1977); *In re Watson*, 517 F.2d 465, 477 (C.C.P.A. 1975).

221. William J. Blonigan, *Road Under Construction: Administrative Claim Interpretations and the Path of Greater Deference from the Federal Circuit to the Patent Office*, 35 AIPLA Q.J. 415, 419 (2007) (“Claims before the PTO receive the ‘broadest reasonable interpretation consistent with the specification . . . as it would be interpreted by one of ordinary skill in the art.’” (quoting *In re Am. Acad. Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004))).

222. It should be acknowledged, however, that the CCPA did not strictly distinguish between this specification-mediated formulation and a more straightforward ordinary artisan rule. Compare *In re Moore*, 439 F.2d 1232, 1235 (C.C.P.A. 1971) (“[Claim] definiteness . . . must be analyzed — not in a vacuum, but always in light of the teachings of the prior art and of the particular application disclosure as it would be interpreted by one possessing the ordinary level of skill in the pertinent art.”), with *id.* at 1236 (“[T]he position of the Board . . . can be justified only if it can be concluded that one of ordinary skill in the art . . . would not be possessed of a reasonable degree of certainty as to [claim scope].”). Likewise, the Federal Circuit apparently does not view the specification-mediated formulation as inconsistent with an ordinary artisan rule; instead, it continues to recognize that the specification-mediated formulation applies in USPTO proceedings. See, e.g., *Phillips v. AWH Corp.*, 415 F.3d 1303, 1316 (Fed. Cir. 2005) (en banc) (observing that the USPTO construes claims by “giving claims their broadest reasonable construction ‘in light of the specification as it would be interpreted by one of ordinary skill in the art’” (quoting *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004))).

223. This phrase is apparently an abbreviation of “*Cuique in sua arte credendum est*,” which means “Everyone is to be believed in his own art.” BLACK’S LAW DICTIONARY 378 (6th ed. 1990).

to questions of art or science peculiar to their trade or profession; but professors or mechanics cannot be received to prove to the court or jury what is the proper or legal construction of any instrument of writing. A judge may obtain information from them, if he desire it, on matters which he does not clearly comprehend, but cannot be compelled to receive their opinions as matter of evidence.²²⁴

The Supreme Court then explained why such testimony could not be expected to produce predictable and uniform claim constructions:

Experience has shown that opposite opinions of persons professing to be experts may be obtained to any amount; and it often occurs that not only many days, but even weeks, are consumed in cross-examinations, to test the skill or knowledge of such witnesses and the correctness of their opinions, wasting the time and wearying the patience of both court and jury, and perplexing, instead of elucidating, the questions involved in the issue.²²⁵

Consistent with the Court's intuition, later emphasis on the public notice function of claims helped to limit the role of the artisan in claim construction. Affirmations of claims' purpose "to apprise the *public* of what is still open to them" repeatedly failed to inspire invocation of an ordinary artisan perspective,²²⁶ as opposed to that of a generalized reasonable person²²⁷ or otherwise unspecified "reader."²²⁸ Occasionally, a court even explicitly differentiated between the audience for claims and the audience for a patent's more detailed written

224. *Winans v. N.Y. & Erie R.R.*, 62 U.S. (21 How.) 88, 100–01 (1858); *cf.* 1 HOPKINS, *supra* note 161, § 97, at 181 ("The testimony of experts as to the construction of letters patent is therefore inadmissible, though they may explain terms of art employed therein and they may testify to facts which are of controlling influence in their construction.")

225. *Winans*, 62 U.S. (21 How.) at 100–01.

226. *McClain v. Ortmayer*, 141 U.S. 419, 424 (1891) (emphasis added); *see also* *White v. Dunbar*, 119 U.S. 47, 52 (1886) ("[I]t is unjust to the public . . . to construe [a claim] in a manner different from the plain import of its terms."); *Merrill v. Yeomans*, 94 U.S. 568, 573 (1876) (emphasizing that due to the "growth of the patent system . . . the variety and magnitude of the interests involved require accuracy, precision, and care in the preparation of all papers on which the patent is founded").

227. *Herz Straw Co. v. Smith*, 52 F.2d 32, 34 (2d Cir. 1931) (L. Hand, J.) ("Language, in a patent as elsewhere, means what reasonable people would mean who use the words in the circumstances in question.")

228. 2 WILLIAM C. ROBINSON, *THE LAW OF PATENTS FOR USEFUL INVENTIONS* § 516, at 127 (1890) ("The language used must be sufficiently clear and accurate to define the invention to the mind of the reader . . .").

description. In 1908, the Court of Appeals of the District of Columbia deflected a challenge to the sufficiency of a patent's technological disclosure by observing that the disclosure — unlike the claims — was “not addressed to the public generally but to those skilled in the art.”²²⁹ Similarly, in 1931, the Supreme Court specified that a “person skilled in the art” is the relevant audience for purposes of enablement, but that the public is the relevant audience for the communication of patent scope.²³⁰

History therefore suggests two additional conclusions: (1) that frequent judicial invocation of an ordinary artisan rule for claim construction is a relatively new phenomenon; and (2) that there are viable alternatives to the ordinary artisan rule, such as an approach that uses artisan knowledge without necessarily adopting the artisan's perspective. How then did we end up with the current ordinary artisan rule? And why have courts not built upon recent Federal Circuit suggestions of a more knowledge-based, rather than perspective-based, role for the artisan?²³¹

At least two interconnected reasons can explain why the ordinary artisan rule has conquered claim construction. First, courts only very slowly separated claim construction from practices and canons that had long tied it tightly to technological inquiries that were naturally governed by an artisan's perspective. Second, when courts sought to emphasize the objective and legal nature of claim construction, they naturally tended to distance claim construction from contract interpretation, which was understood to entail the comparatively subjective and factual task of discerning parties' intent. Hence, in *Markman v. Westview Instruments, Inc.*,²³² the Federal Circuit contrasted “the objective test of what one of ordinary skill in the art at the time of invention would have understood the term to mean” with “the subjective intent of the parties.”²³³ Desire for an objective reference point for construction thus seems to have led courts to invoke an apparently reasonable, off-the-rack perspective that had a well-established basis in other areas of patent law. Courts appear to have given little scrutiny to the difference between the consequent requirement of an artisan

229. *Mark v. Greenawalt*, 32 App. D.C. 253, 258 (D.C. Cir. 1908). *But see, e.g., In re Duncan*, 265 F. 1012, 1012 (D.C. Cir. 1920) (“The statute requires an applicant to so formulate his claims that the experts of the Patent Office may understand definitely what they mean, and the invention must be so distinctly described as to be understood by one ordinarily skilled in the art . . .”).

230. *Permutit Co. v. Graver Corp.*, 284 U.S. 52, 60 (1931).

231. *Apex Inc. v. Raritan Computer, Inc.*, 325 F.3d 1364, 1373 (Fed. Cir. 2003) (“[C]laims are interpreted in light of the specification and with the knowledge of one of ordinary skill in the art.”); *see also* *Deering Precision Instruments, L.L.C. v. Vector Distribution Sys., Inc.*, 347 F.3d 1314, 1323 (Fed. Cir. 2003) (quoting *Apex*, 325 F.3d at 1373).

232. 52 F.3d 967 (Fed. Cir. 1995) (en banc), *aff'd*, 517 U.S. 370 (1996).

233. *Id.* at 986.

perspective and earlier assertions of a more specification-mediated or knowledge-based role for the artisan. The unfortunate result is an ordinary artisan rule for claim construction that may be little more than a vestigial structure — one that, like the human appendix, does little apparent good but can do much harm. Part IV will argue that this rule should be abandoned.

IV. ELIMINATING THE DISJUNCTION BETWEEN STATED RULE AND PRACTICE

Part III has shown that claim construction is a largely lawyerly exercise substantially divorced from the artisan perspective alleged to govern it. The question for this Part is what, if anything, should be done about the disjunction between stated rule and actual practice.

A. Problems with an Ordinary Artisan Perspective

If having a meaningful governing perspective is a good idea, why not simply retain today's ordinary artisan rule, but alter the subrules of claim construction to conform to it? If predictability and efficiency are goals, there are at least two problems with this approach: (1) the relevant group of artisans can be difficult to identify; and (2) an artisan's perspective is unlikely to act as a useful point of reference because artisans do not typically constitute an actual interpretive community for patent claims. Because ordinary artisans are not typically in the business of interpreting claims, they are not likely to have developed rules, conventions, or consensus views to guide claim construction. Under these circumstances, efforts to adhere to an artisan's perspective make a fetish of a phantom by subjecting claim construction to governance by a perspective that likely has no existence outside of litigation.

Judges currently determine the literal scope of patent rights by construing claims as a matter of law.²³⁴ Further, unlike a patent's written description, claims tend not to be designed to communicate substantive technological know-how.²³⁵ Hence, as indicated in Part III.B, there is no intrinsic reason why claim construction must be governed

234. *Markman v. Westview Instruments, Inc. (Markman II)*, 517 U.S. 370, 391 (1996) (holding that construction of a claim term was “an issue for the judge, not the jury”); *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1456 (Fed. Cir. 1998) (en banc) (stating that “as a purely legal question, we review claim construction de novo on appeal”).

235. In regimes not characterized by peripheral claiming but instead by claims that operate as mere pointers to the written description, Mueller, *supra* note 28, at 505, it would make more sense for the audience of claims to be viewed as equivalent to that for the written description, since there no longer would be as significant a distinction between claims and the written description themselves.

by the same artisan perspective that the Patent Act requires for assessing questions of nonobviousness and enablement.

Indeed, because claims are written to define legal bounds rather than to communicate technological understanding, business decision-makers, lawyers, and patent examiners are more likely than ordinary artisans to be the real parties in interest for questions about claim meaning.²³⁶ Once an application is before the USPTO, interchanges about the meaning of claims typically occur between a patent examiner and a patent attorney or agent²³⁷ — persons who have some technological training, but who frequently neither share the same background nor possess training or experience sufficient to make them persons of ordinary skill in the technology of the claimed invention.²³⁸ For such parties, the largest common denominator for understanding is not likely to be the language of any particular technology — even assuming that such a technology-specific language is in fact well defined. Instead, their most fluent *lingua franca*

236. See, e.g., FOUNDATIONS OF INTELLECTUAL PROPERTY 128 (Robert P. Merges & Jane C. Ginsburg eds., 2004) (“[T]he ‘interpretative audience’ for most patents is likely to be primarily customers and competitors of the patentee”); THOMAS J. GREER, JR., WRITING AND UNDERSTANDING U.S. PATENT CLAIMS 1 (1979) (“[W]ith the exception of a few federal judges and an occasional engineer or executive, only two groups of people are familiar with patent claims. Namely, patent attorneys who write them and examiners in the U.S. Patent and Trademark Office”); Jeanne C. Fromer, *Patent Disclosure*, 94 IOWA L. REV. (forthcoming 2009) (manuscript at 22, available at <http://ssrn.com/abstract=1116020>) (characterizing a patent’s “legal layer describing the metes and bounds of the patent right” as “of interest to competitors . . . , the PTO . . . , courts . . . , and lawyers, usually patent specialists”); Lutz, *supra* note 166, at 490 (“[T]he present system of claims evolved mainly to meet the requirements of the courts and the Patent Office.”). Such decision-makers may even actively discourage the reading of patents by scientists and engineers. See Golden, *supra* note 5, at 2157. By the time a patent or patent application is published, most of its useful information will likely be available via other channels, such as conference proceedings or scientific journals. Thus, reading such patents or applications will probably provide little substantive benefit for scientific or engineering purposes, but will increase the risk of enhanced damages due to a finding of willful infringement.

237. See Lichtman, *supra* note 94, at 161 (noting that “approximately two thirds of the applications” among 20,000 “identif[ied] the law firm that represented the applicant during prosecution”).

238. An individual can meet the educational qualifications for being an examiner by having an undergraduate degree in any of a number of scientific or engineering fields, along with an overall undergraduate grade-point-average of a B- or better. See U.S. Patent & Trademark Office, Examine the Possibilities: Qualifications, <http://www.uspto.gov/go/ac/ahrpa/ohr/jobs/qualifications.htm> (last modified Apr. 17, 2007) (listing qualifying degrees and course hours, and stating that the basic requirement of “Superior Academic Achievement” is satisfied by a “[g]rade point average (GPA) of at least 2.66 out of a possible 4.0 for all courses completed during your entire undergraduate education or during the final 2 years of your undergraduate curriculum”). Likewise, an individual can show “the required scientific and technical training” to apply for the patent bar by “provid[ing] an official transcript showing that a Bachelor’s degree was awarded in” any of a number of scientific or engineering fields. U.S. PATENT & TRADEMARK OFFICE, GENERAL REQUIREMENTS BULLETIN FOR ADMISSION TO THE EXAMINATION FOR REGISTRATION TO PRACTICE IN PATENT CASES BEFORE THE UNITED STATES PATENT AND TRADEMARK OFFICE 4 (2008), available at <http://www.uspto.gov/web/offices/dcom/olia/oed/grb.pdf>.

is likely to be “patent claim English,” that peculiar dialect that has resulted from practice, precedent, and USPTO rules.²³⁹

The nature of claims’ primary audience does not change too dramatically after a patent issues. Decisions that claim interpretation is meant to inform — such as whether to pursue a particular course of research and development, to launch a new product or service, to invest in another’s efforts to do either of these, or to make one’s own separate business reliant on a potentially infringing product or service²⁴⁰ — are business decisions typically made by people having little, if any, skill in the relevant technology.²⁴¹

Courts currently recognize the existence of a non-artisan audience for patents in multiple contexts. When the Supreme Court emphasized the public notice function of patent claims in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*,²⁴² the Court explicitly referred to the concerns of “competitors,” whose investment, manufacturing, and litigation decisions might be affected by perceptions of patent scope. The Court did not even mention the concerns of artisans.²⁴³

The Federal Circuit has acknowledged the non-artisan nature of claims’ interpretive community in two other contexts involving concerns of public notice: assessing claim definiteness and determining the applicability of prosecution history estoppel. Prosecution history estoppel occurs when a patent applicant is deemed to have confined the scope of potential infringement to a claim’s literal terms by

239. See *supra* text accompanying notes 69 to 89.

240. See *Gen. Elec. Co. v. Wabash Co.*, 304 U.S. 364, 369 (1938) (“The inventor must ‘inform the public during the life of the patent of the limits of the monopoly asserted, so that it may be known which features may be safely used or manufactured without a license and which may not.’” (quoting *Permutit Co. v. Graver Corp.*, 284 U.S. 52, 60 (1931))); see also *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 732 (2002) (“If competitors cannot be certain about a patent’s extent, they may be deterred from engaging in legitimate manufactures outside its limits, or they may invest by mistake in competing products that the patent secures.”).

241. A company, such as a law firm deciding what types of computers to use, may act in a purely consumptive role with respect to potentially infringing products or services, and may therefore lack any personnel with true expertise in the relevant technology (for example, computer or computer-part design or manufacturing).

242. 535 U.S. 722 (2002).

243. *Id.* at 732; see *Consolidated Elec. Light Co. v. McKeesport Light Co.*, 159 U.S. 465, 474 (1895) (“The object of [the Patent Act’s requirement of a written description and claims] is to apprise the public of what the patentee claims as his own, the courts of what they are called upon to construe, and competing manufacturers and dealers of exactly what they are bound to avoid.”); FABER, *supra* note 69, at 1-1 to 1-2 (describing the Patent Act as requiring that claims “define ‘the invention’ . . . in such detail that the patent examiner and, later, the world of prospective infringers and judges who construe the claims can understand what the claimed subject matter is”); John F. Duffy, *On Improving the Legal Process of Claim Interpretation: Administrative Alternatives*, 2 WASH. U. J.L. & POL’Y 109, 159 (2000) (“If patent attorneys advising their clients can reliably predict how particular claim language will be interpreted in enforcement proceedings, then the claim has served its purpose.”).

amending the claim or making statements to the USPTO during examination.²⁴⁴ In the estoppel context, it is well established that “[t]he relevant inquiry is whether a *competitor* would reasonably believe that the applicant had surrendered the relevant subject matter.”²⁴⁵ When required to choose between the “reasonable competitor” and “ordinary artisan” perspectives in applying the doctrine of estoppel, the Federal Circuit facially denied that a difference existed, but effectively declared a preference for the former, saying, “[T]he point is the *knowledge* of one reasonably skilled in the art who views the question from the *perspective* of a competitor in the marketplace.”²⁴⁶ Likewise, the court has emphasized:

The primary purpose of the definiteness requirement is to ensure that the claims are written in such a way that they give notice to the public of the extent of the legal protection afforded by the patent, so that interested members of the public, e.g., *competitors* of the patent owner, can determine whether or not they infringe.²⁴⁷

244. MUELLER, *supra* note 138, at 298–300. In the absence of estoppel, infringement can generally occur not only when an unauthorized product or process satisfies the literal scope of a claim’s terms, but also when, even though outside the claim’s literal scope, a product or process is “equivalent” to the claimed invention on an element-by-element basis. *See Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 520 U.S. 17, 21, 28–30 (1997).

245. *Catalina Mktg. Int’l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 813 (Fed. Cir. 2002) (emphasis added) (citing *Cybor Corp. v. FAS Techs., Inc.*, 138 F.3d 1448, 1457 (Fed. Cir. 1998) (en banc)); *cf.* *Spring Windows Fashions LP v. Novo Indus., L.P.*, 323 F.3d 989, 995 (Fed. Cir. 2003) (viewing a “reasonable competitor” perspective as the proper viewpoint from which to evaluate whether the scope of claims should be understood to be restricted by prosecution history disclaimer). While deciding a claim construction question in *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350 (Fed. Cir. 1999), the Federal Circuit invoked both competitor and artisan viewpoints, rejecting an argument that the specification provided a definition for a claim term on the ground that quoted material did “not so clearly redefine [claim language] so as to put a reasonable competitor *or* one reasonably skilled in the art on notice.” *Id.* at 1357 (emphasis added).

246. *Haynes Int’l, Inc. v. Jessop Steel Co.*, 8 F.3d 1573, 1578 n.4 (Fed. Cir. 1993), *amended by* 15 F.3d 1076 (Fed. Cir. 1994) (emphasis added).

247. *All Dental Prodx, LLC v. Advantage Dental Prods., Inc.*, 309 F.3d 774, 779–80 (Fed. Cir. 2002) (emphasis added); *see also* *Markman v. Westview Instruments, Inc. (Markman I)*, 52 F.3d 967, 978 (Fed. Cir. 1995), *aff’d*, 517 U.S. 370 (1996) (“[I]t is only fair (and statutorily required) that competitors be able to ascertain to a reasonable degree the scope of the patentee’s right to exclude.”). The case law seems somewhat unclear on another technical point — namely, the standard for overcoming a presumption that a patentee surrendered an argument of infringement under the doctrine of equivalents. The Supreme Court has stated that, to do so, “[t]he patentee must show that at the time of the amendment *one skilled in the art* could not reasonably be expected to have drafted a claim that would have literally encompassed the alleged equivalent.” *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722, 741 (2002) (emphasis added). This statement has led the authors of one casebook to ask, “Which art? Is it the art of claim drafting, or the technological field of the particular invention?” MERGES & DUFFY, *supra* note 91, at 877. At least one

The law of willful infringement is a further context where courts have, at least implicitly, recognized a non-artisan audience for claims. Willful infringement, which is currently defined as infringement with at least objectively reckless disregard of another's patent rights,²⁴⁸ can trigger a heavy penalty — up to treble damages.²⁴⁹ Significantly, an opinion from a patent attorney saying that relevant patent claims are either not valid or not infringed has long been an important safeguard against a later finding of willfulness. For decades, the courts even held that “actual notice of another's patent rights” triggered a “duty to seek and obtain competent legal advice from counsel before the initiation of any possible infringing activity.”²⁵⁰ The Federal Circuit has recently eliminated this duty²⁵¹ and declared that failure to obtain an attorney opinion will “no longer provide an adverse inference or evidentiary presumption that such an opinion would have been unfavorable.”²⁵² Nonetheless, a reliable attorney opinion can still be crucial evidence for establishing lack of willfulness.²⁵³ A favorable artisan's opinion is unlikely to provide nearly as much assurance.²⁵⁴

Thus, the law of willfulness provides a powerful reason for considering a patent attorney's perspective to be the perspective that governs claim construction. As a result of the peculiar nature of claim language and the law of willful infringement, the perspective of the

member of the Federal Circuit has recently indicated a belief that the relevant art is that of claim drafting. *See Festo*, 344 F.3d at 1377 (Rader, J., concurring) (“[A]ny after-arising technology . . . would not fall within the scope of what the drafter would have foreseen and claimed. After all, a skilled patent drafter is a legal technician, not an inventor.”).

248. *In re Seagate Tech., LLC*, 497 F.3d 1360, 1371 (Fed. Cir. 2007) (en banc).

249. 35 U.S.C. § 284 (2000).

250. *Underwater Devices Inc. v. Morrison-Knudsen Co.*, 717 F.2d 1380, 1389–90 (Fed. Cir. 1983), *overruled en banc by Seagate*, 497 F.3d 1360.

251. *Seagate*, 497 F.3d at 1371 (abrogating “the affirmative duty of due care” and stressing “that there is no affirmative obligation to obtain opinion of counsel”).

252. *Knorr-Bremse Systeme fuer Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337, 1346 (Fed. Cir. 2004) (en banc).

253. *See Seagate*, 497 F.3d at 1374 (assuming the continued existence of issues “stemming from an advice of counsel defense to willfulness”); *Cohesive Techs., Inc. v. Waters Corp.*, 526 F. Supp. 2d 84, 103–04 (D. Mass. 2007) (stating that, in assessing willfulness, “a court should consider . . . whether the infringer solicited or followed the advice of counsel,” and finding lack of proof of willfulness in part because the infringer had “obtained an opinion of counsel in good faith”); *see also Union Carbide Chems. & Plastics Tech. Corp. v. Shell Oil Co.*, 425 F.3d 1366, 1380–81 (Fed. Cir. 2005) (affirming a jury verdict of no willful infringement where the defendants reasonably relied on the opinion of “an in-house patent attorney” with a Ph.D. in chemical engineering); *Harris Corp. v. Ericsson Inc.*, 417 F.3d 1241, 1259 (Fed. Cir. 2005) (affirming a jury verdict of willful infringement in part because “evidence provided the jury with some basis for believing . . . that [outside counsel's] opinion was simply a rehashing of [the defendant's] own internal conclusions on noninfringement”).

254. *See, e.g., Velcro Indus. B.V. v. Taiwan Paiho Ltd.*, No. Civ. 04-CV-242-JD, 2005 WL 2573383, at *7 (D.N.H. Oct. 12, 2005) (observing that the plaintiff could “use [an] interrogatory answer to argue that [the defendant] did not in fact receive a ‘legal opinion,’ but merely oral advice from a ‘Patent Engineer’”).

interested businesspersons referenced in opinions like *Festo* is likely to be primarily the perspective of a patent attorney that such a businessperson employs. The often abstruse nature of “patent claim English” is likely to alert a businessperson of the need to seek legal counsel,²⁵⁵ and the law of willfulness multiplies the force of that intuition. When a substantial investment is at stake, most businesspersons are likely to consider it no more than due diligence to consult an attorney — not an artisan — to assess the risk of treading on valid patent rights.²⁵⁶

Even if the law of willfulness permitted greater confidence in an artisan’s opinion, primary reliance on an unalloyed artisan’s view — one not guided by the understandings of an experienced reader of patent claims — seems intrinsically unlikely to provide a reliable basis for predictable construction.

To the extent an artisan’s view is the focus of claim construction, the threshold problem of identifying the nature of the ordinary artisan becomes significantly more crucial. If taken seriously, this threshold problem can itself trigger a number of difficult sub-questions. For example, it might be difficult to specify the relevant art. If the invention is a new kind of plastic fishing lure formed by mixing salt with plastic, is the relevant “art” the art of making plastic fishing lures or the art of plastics manufacturing?²⁵⁷ Alternatively, if a claim specifies a mean particle diameter, should that average be determined as a researcher in the field would determine it (by numerically averaging diameters of all individual particles) or as a manufacturer would determine it for use in specifications for customers (by calculating the diameter corresponding to the average volume of an individual particle)?²⁵⁸

Even if the identity of the relevant art is clear, there will be questions regarding more specific characteristics of the ordinary artisan. How many years of post-graduate education must such an artisan have? How many years of experience in industry? How much knowledge of patents and patent law? Is the ordinary artisan familiar with

255. See *supra* text accompanying notes 93 to 95.

256. Of course, incurring the cost required for a reliable assessment of patent scope may not make economic sense if little is perceived to be at stake because, for example, a potential infringer is making a minimal investment. The lack of any provision for criminal liability for patent infringement may help maintain the perception of small stakes in such a situation.

257. See *Arkie Lures, Inc. v. Gene Larew Tackle, Inc.*, 119 F.3d 953, 958 (Fed. Cir. 1997) (“Whether some plastics manufacturers knew how to mix salt and plastisol, as was argued in the district court, did not make it obvious to proceed against the general view in the field of plastic fish lures.”).

258. See *OSRAM GmbH v. ITC*, 505 F.3d 1351, 1356 (Fed. Cir. 2007) (observing that “OSRAM’s witness distinguished the way powders are sold from the way they are characterized by scientists working on LED development”).

the linguistic conventions of last year's college graduates, last year's Ph.D. recipients, the subset of artisans who regularly attend professional conferences, or the subset who have substantial experience in explaining their art to non-artisans? In speaking or writing, does the ordinary artisan tend toward linguistic abstraction and metaphor, or instead toward strict literalism? Does the ordinary artisan speak in different ways on the shop floor, in a formal presentation to other artisans, to a lay audience, to a businessperson, and to an attorney? If so, which of these manners of speaking should govern our understanding of patent claims?

The uncertainty generated by such questions²⁵⁹ is likely to leave a party with little confidence that any particular artisan it consults will have a viewpoint matching the one that a court will ultimately find to govern claim construction. Even if there is agreement on the general characteristics of an ordinary artisan, any individual artisan may have only relatively personal and idiosyncratic views on claim meaning.²⁶⁰ Because artisans as a class are not a well-constituted interpretive community for claims, a party may need to expend substantial effort simply to determine whether there is any well-defined "artisan view."

The resulting costs and uncertainty from an artisan rule are less tolerable for claim construction than for questions of enablement, nonobviousness, or equivalence. For those questions, resort to an artisan perspective is justified by a fundamental concern with technological similarity or disclosure. Moreover, for those questions, the uncertainty produced by an ordinary artisan rule is confined either by a strong presumption of patent validity or by "on-off" doctrines that limit the applicability of such analysis, such as prosecution history estoppel. The costs and uncertainty associated with an ordinary artisan rule are more troublesome in the claim construction context for at least two reasons: the utility of an ordinary artisan perspective is more doubtful,²⁶¹ and the multipolar nature of claim construction makes it less susceptible to simplification through strong presumptions like that applied to binary questions of validity.

Such concerns about having claim construction turn on the nature of the ordinary artisan bear a strong relation to reasons for confining the role of extrinsic evidence in claim construction. Courts and commentators have long recognized that limiting the role of extrinsic evidence can advance the public notice function of patent claims. Someone who reads claims in advance of litigation may not have the

259. Cf. Mullally, *supra* note 25, at 352 ("The level of skill thus varies greatly and can change within a given discipline over time as the field advances and new information becomes available.").

260. Cf. Scott A. Turk, *The Proper Method for Using Dictionaries to Construe Patent Claims*, 6 CHL-KENT J. INTELL. PROP. 43, 60 (2006).

261. See *infra* text accompanying notes 266-268.

time, resources, or access rights necessary to survey all the extrinsic evidence that a court could consider, and will, more generally, only be able to speculate about the precise contents of a later-developed extrinsic record.²⁶² Further, as the Federal Circuit observed in its recent en banc opinion in *Phillips v. AWH Corp.*, there are a number of reasons to believe that extrinsic evidence is less reliable and more manipulable than intrinsic evidence:²⁶³ (1) extrinsic evidence may not be well suited for “explaining the patent’s scope and meaning” because it is not “created at the time of patent prosecution for [that] purpose”; (2) extrinsic evidence such as dictionary definitions may provide a purposely distorted image of reality because it may be cherry-picked from a “virtually unbounded universe”; and (3) extrinsic evidence, such as expert testimony, “can suffer from bias” because it may be “generated at the time of and for the purpose of litigation.”²⁶⁴

A further concern with extrinsic evidence is that it can drive a wedge between the information available to courts and that available to USPTO examiners. Examiners generally cannot call on outside experts for help and are even severely restricted, due to confidentiality concerns, in doing Internet searches relating to the subject matter of unpublished applications.²⁶⁵ Thus, to the extent it is desirable for examiners to be able accurately to predict how courts will interpret the claims that examiners allow, courts’ use of extrinsic evidence unavailable to examiners can make such accurate prediction less likely.

Finally, even aside from concerns about identifying a representative artisan or relying on extrinsic evidence about an artisan’s views, there is the question of whether an artisan perspective best minimizes and resolves ambiguities in patent scope. Whatever the nature of a representative artisan, it is unlikely that the artisan belongs to any meaningful interpretive community for patent claims. Indeed, the artisan is probably unaccustomed to, and perhaps even unsympathetic with, demands to articulate claim boundaries with the precision neces-

262. *Cf.* *Vitronics Corp. v. Conceptronic, Inc.*, 90 F.3d 1576, 1583 (Fed. Cir. 1996) (“[C]ompetitors are entitled to review the public record, apply the established rules of claim construction, ascertain the scope of the patentee’s claimed invention and, thus, design around the claimed invention.”); *Kaiser*, *supra* note 41, at 1033 (arguing in favor of “the court bas[ing] its claim construction primarily on the documents available to the competitor”). See generally Lefstin, *supra* note 15, at 1063 (“If all observers (judicial or otherwise) begin with approximately the same set of information, we maximize the likelihood of achieving consistent interpretations.”); Toshiko Takenaka, *Claim Construction and the Extent of Patent Protection: A Comparative Analysis of the Phillips en banc Federal Circuit Decision*, 1 J. INTELL. PROP. L. & PRAC. 119, 130 (2005) (“Courts should keep in mind that claims are drafted by a human being, not a super-human hypothetical person . . .”).

263. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005) (en banc).

264. *Id.* (listing five reasons to consider extrinsic evidence “less reliable than the patent and its prosecution history in determining how to read claim terms”).

265. See *supra* note 64.

sary to decide a particular case.²⁶⁶ After all, the artisan's expertise and interest are in working with, developing, and understanding technology, not in defining its legal boundaries. In contrast, patent attorneys and agents, USPTO examiners, and claim-construing courts are part of a meaningful interpretive community for patent claims.²⁶⁷ It is at least plausible that the members of such a community can develop an approach to claim drafting and interpretation that provides more certainty than would result from relying on the views of an artisan whose experience, skills, and interests lie elsewhere.²⁶⁸

B. Undesirability of the Disjunction Between Rule and Practice

Should the mismatch between claim construction practice and the ordinary artisan rule trouble us? If the courts' misguided invocation of the ordinary artisan perspective has not tightly constrained practice, is it worth bothering to correct the error? The sophisticated target audience of claims will probably act in accordance with what courts and others actually do, so it might be argued that there is little harm from the courts' mouthing of the empty ordinary artisan mantra.

Nonetheless, there are a number of reasons why it makes sense to revisit the governing perspective for claim construction. As a general matter, even when a rule is not closely followed in practice, its frequent statement can mislead and distract. Open adoption of a perspec-

266. Cf. Marmor, *supra* note 35, at 10 (“[P]art of what makes context often clearer than one would have assumed is the fact that the law typically speaks to a legal community, not to lay people.”).

267. See John R. Thomas, *On Preparatory Texts and Proprietary Technologies: The Place of Prosecution Histories in Patent Claim Interpretation*, 47 UCLA L. REV. 183, 185 n.6 (1999) (“[W]e can at least acknowledge that the patent professionals form an interpretative community.”).

268. See, e.g., MERGES & DUFFY, *supra* note 91, at 29 (stating that “specialized words” for use in patent claims “have been selected over time to describe elements and their interaction in the most succinct and yet *most general* manner”); Woodward, *supra* note 69, at 755 (“[P]rofessional jargon, if properly used, may aid rather than detract from certainty of interpretation”); cf. *Autogiro Co. of Am. v. United States*, 384 F.2d 391, 397 (Ct. Cl. 1967) (“Since the ability to verbalize is crucial in statutory enactment, legislators develop a facility with words not equally developed in inventors.”). It might be argued that patent attorneys and even Federal Circuit judges have incentives to make claim construction unpredictable: greater difficulty in claim construction may generate more attorney business, and a wider range of interpretive choices may give judges more discretionary power. But a comparison of claim construction law today with the law before the creation of the Federal Circuit suggests that the Federal Circuit has made the rules of claim construction clearer. Moreover, although practitioners often push against the boundaries of claim construction in particular cases, greater overall predictability may be in the bar's net economic interest. To the extent claim construction is unpredictable, clients may have little reason to invest in either patents or attorney advice regarding them. Although greater uncertainty might yield more litigation per patent, it could also lead to lower overall investment in patents, patent-related legal services, and innovation. Similarly, although incoherent claim construction law may give Federal Circuit judges more discretionary power in individual cases, it limits their ability to use precedential rulings to project their views over a broad range of cases.

tive that is in greater harmony with claim construction's subrules would promote greater transparency and coherence in the law.²⁶⁹ Increased transparency and coherence would make the law easier to understand and apply, thus clearing the way for a more realistic assessment of the law's condition and how it might be improved.

At best, the ordinary artisan rule prevents use of an alternative rule that might provide better guidance.²⁷⁰ At worst, it invites detrimental reliance by suggesting to the unwary that the key to accurate claim interpretation is consultation with ordinary artisans, rather than with someone experienced in claim construction law and practice. Although the highly stylized and facially legalist nature of claims is likely to put even unsophisticated readers on notice that they should consult a legal expert, the law should not confuse the issue by also signaling the contrary.

Moreover, the ordinary artisan rule has demonstrated a capacity to mislead or distract even the legal cognoscenti. Legal commentators have cited the rule to support arguments for making claim construction more responsive to extrinsic evidence.²⁷¹ The Federal Circuit's Chief Judge has invoked the rule to argue for reconsideration of whether appellate review of claim construction should be wholly *de novo*.²⁷² Such invocations of the ordinary artisan rule not only distract advocates from more productive discussions, but also risk triggering an ill-considered increase in courts' reliance on extrinsic evidence, with all the disadvantages that could entail.²⁷³

Indeed, patent law may already have suffered damage from mistaken invocation of the ordinary artisan rule. The ordinary artisan rule inevitably generates tension with subrules of claim construction that are strongly suspicious of extrinsic evidence.²⁷⁴ An ordinary artisan cannot share this suspicion. The ordinary artisan necessarily begins the process of claim construction with what the courts consider disfa-

269. See Saunders, *supra* note 22, at 239 (arguing that *Phillips* has produced "subterfuge," in which courts "use dictionary definitions under the guise of 'ordinary meaning' without indicating what sources to which [they] refer").

270. Although courts in a number of countries putatively use an ordinary artisan perspective for claim construction, they have used this perspective to justify strikingly different interpretive methodologies. This fact further suggests that the ordinary artisan perspective is little more than a makeweight, meaninglessly invoked in relation to any of a wide range of approaches. See TAKENAKA, *supra* note 150, at 127–29 (noting that German "courts use the perspective of a hypothetical person in the art . . . to expand the literal meaning" to include "variations and equivalents," whereas Japanese courts historically invoked this perspective "to support a narrow claim construction" tied to "disclosed embodiments").

271. See *supra* note 26 and accompanying text.

272. See *supra* note 27 and accompanying text.

273. See *supra* text accompanying notes 261 to 265.

274. See, e.g., *Phillips v. AWH Corp.*, 415 F.3d 1303, 1318 (Fed. Cir. 2005) (en banc) ("[C]onclusory, unsupported assertions by experts as to the definition of a claim term are not useful to a court.").

vored extrinsic evidence. To construe claims as the courts construe them, the ordinary artisan would have to ignore embedded views on meaning and read the claims and specification not as an ordinary artisan, but as someone else.²⁷⁵

The tension that results from this conflict between the ordinary artisan rule and actual practice helps explain the courts' inability to find a comfortable resting place on such issues as how to weigh different kinds of evidence and whether to treat claim construction as a pure question of law. Because the practice of claim construction is so disconnected from the ordinary artisan rule, that rule can provide little guidance for the practice. It should not be surprising if the result is a claim construction jurisprudence that seems rootless and unusually vulnerable to methodological swings.

The courts' recent, abortive experiment with extreme dictionary-driven claim construction is a case in point. The ordinary artisan rule contributed to this experiment by indicating that claims' true meaning lies in the minds of artisans and thus outside both the patent document and the understandings of its real-world interpretive community. Given judges' suspicions of litigation-generated extrinsic evidence, they likely perceived dictionaries as the best way to access the artisan's noumenal world.²⁷⁶ An approach to claim construction that focuses on a more accessible perspective — one defined by the customs and experience of a true interpretive community — would reduce the temptation to clutch at straws.

C. A Hybrid Alternative to the Ordinary Artisan Rule

What alternatives are there to the current empty invocation of an ordinary artisan perspective for claim construction? Part IV.A argued

275. In *Vitronics Corp. v. Conceptor, Inc.*, 90 F.3d 1576 (Fed. Cir. 1996), the Federal Circuit made clear that direct evidence of an artisan's views on claim meaning is generally disfavored:

Had the district court relied on the expert testimony and other extrinsic evidence solely to help it understand the underlying technology, we could not say the district court was in error. But testimony on the *technology* is far different from other expert testimony . . . on the *proper construction* of a disputed claim term, relied on by the district court in this case.

Id. at 1585.

276. See, e.g., *Tex. Digital Sys., Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 1202–03 (Fed. Cir. 2002) (repeatedly justifying a dictionary-driven approach to claim construction as a way to construe claims according to the views of “those skilled in the art”); Miller, *supra* note 8, at 191 (“This increased reliance on dictionaries and the like . . . appears rooted in a desire to obtain adequate information about the meaning of claim terms to people having ordinary skill in the art . . . without falling prey to biased advocacy masquerading as expert testimony.”); cf. Miller & Hilsenteger, *supra* note 22, at 909 (“Given . . . that expert testimony continues to bear the taint of comparatively greater bias, one must expect some courts to prefer dictionaries as sources for ordinary meaning.”).

against trying to follow the ordinary artisan rule in actual practice. The following additional alternatives are considered in turn:

- (1) no paradigm perspective at all — for example, use of a simple standard of reasonableness without reference to any governing perspective;
- (2) an ordinary artisan rule that is publicly acknowledged to be merely a proxy for use of the specification to understand the claims;
- (3) a pure patent attorney rule requiring that claims be interpreted from the perspective of an ordinary patent attorney, based solely on the intrinsic evidence and independently generated extrinsic evidence such as dictionaries or treatises; and
- (4) a hybrid rule requiring that claims be construed from the perspective of a reasonable patent attorney who has access to an ordinary artisan’s technological knowledge.²⁷⁷

The first possibility — abandoning efforts to tie claim construction to a particular perspective — would eliminate problematic invocation of an ordinary artisan’s perspective while leaving in place a host of subrules for claim construction.²⁷⁸ These subrules might be thought to provide enough instruction.

Such faith in subrules, however, would quickly be dashed. The subrules themselves are often conflicting and indeterminate.²⁷⁹ Reference to a governing perspective can help break ties that the subrules generate. A governing perspective can do this by referring the courts to the habits and capacities of a well-defined interpretive community, thereby suggesting the objectives that should drive construction and the evidence that should be considered and weighed.²⁸⁰ For example, current reference to an ordinary artisan’s perspective can suggest that extrinsic evidence like expert testimony should have a greater role in

277. With some rough equivalence but a shift in emphasis, this last possibility might also be characterized as the perspective of an ordinary artisan working with a reasonable patent attorney. This characterization might ease transition from current invocations of an ordinary artisan rule to an analog of the hybrid perspective proposed in the text, and would fit with case law holding “that inventors represented by counsel are presumed to know the law” for purposes of assessing inequitable conduct. *Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*, 267 F.3d 1370, 1385 (Fed. Cir. 2001).

278. The USPTO’s current rule for claim construction in interferences demonstrates the ability to state a rule for “reasonable” construction that makes no reference to a governing perspective. 37 C.F.R. § 41.200(b) (2008) (“A claim shall be given its broadest reasonable construction in light of the specification of the application or patent in which it appears.”).

279. The rules that claims should be read in light of the specification and that the specification should not limit the claims are examples. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1323 (Fed. Cir. 2005) (en banc) (“[W]e recognize that the distinction between using the specification to interpret the meaning of a claim and importing limitations from the specification into the claim can be a difficult one to apply in practice.”).

280. *See supra* Part II.

claim construction.²⁸¹ On the other hand, reference to a patent attorney's perspective would favor intrinsic evidence and fidelity to established rules for claim interpretation. The "no governing perspective" approach would therefore deny courts a reference point that might tip difficult cases in a predictable way.

The second proposal — retention of the artisan rule combined with public acknowledgment that it is merely a proxy for reliance on the specification — suffers from the same limitations as the "no governing perspective" approach. In essence, this proposal simply gives one subrule (fidelity to the specification) a favored place without further instruction on how to mediate conflicts with or between other subrules.

Moreover, the proposal seems a manifestly clumsy way to emphasize the importance of fidelity to the specification. As the recent experience with dictionary-driven claim construction suggests,²⁸² the artisan rule may in fact encourage reliance on evidence outside the specification. If the real goal is to stress the importance of the specification, why not do so more unequivocally and directly? Why not return to the CCPA's instruction to read "[c]laim language . . . in light of the specification as it would be interpreted by one of ordinary skill in the art"?²⁸³ History has proven that invocation of an ordinary artisan's perspective is not necessary to make courts recognize that the remainder of the patent should be used as an aid in interpreting the claims.²⁸⁴

What about the next alternative perspective — a pure patent attorney's view? Such a perspective would point a construer of claims to the likely views of a true interpretive community. Anchorage in this community would avoid the problems of rootlessness and overly individualized artisan dependence created by reference to the perspective of artisans who are not regular, active members of such a larger interpretive group. Once the reference point is the perspective of someone who belongs to a true interpretive community, the approach to claim construction becomes rooted in the views of that community rather than an individual. There is a natural reduction in the importance of, first, defining detailed individual characteristics of the relevant perspective holder and, then, obtaining expert testimony from an individ-

281. *See supra* note 26.

282. *See supra* text accompanying note 276.

283. *In re Johnson*, 558 F.2d 1008, 1016 (C.C.P.A. 1977).

284. *See supra* note 214 and accompanying text; *see also* 6 ERNEST BAINBRIDGE LIPSCOMB III, LIPSCOMB'S WALKER ON PATENTS § 21:32, at 372–73 (3d ed. 1987) ("An uncommon word in a claim is to be construed in the light of the description, rather than . . . the dictionary, because the patentee presumably knew the description . . . and because the reader of a patent may reasonably be expected to consult the description before he consults the dictionary . . .").

ual with those characteristics. Whatever the particular background of a competent patent attorney, the attorney's views on the proper construction of claim language will be conditioned by the practices and rules of the larger interpretive group.²⁸⁵

Further, that community's practices and rules are to a substantial extent already recorded in readily accessible public materials: court and agency rulings on claim meanings; USPTO rules and guidance;²⁸⁶ issued patents and their prosecution histories (which commonly involve interpretations of claim meaning by examiners and explanations of such meaning by patent attorneys or agents); and also books and bar journals. Those practices and rules have, in turn, commonly been designed to advance fundamental goals of claim construction law — namely, efficiency, the public notice function of claims, and the certainty that comes from clarity.²⁸⁷ The patent attorney perspective should therefore be more determinate of claim meaning than the perspective of an ordinary artisan. Moreover, because the patent attorney perspective is essentially a legal one, a court, patent attorney or agent, or USPTO examiner can assume this perspective more easily than that of the ordinary artisan, and with comparatively little need for technological expertise.

On the other hand, there are times when detailed technological knowledge is needed for a sensible construction of patent claims. By not incorporating explicit reference to technological knowledge, a pure patent attorney rule could fail to exploit the baseline guidance that such knowledge can provide. Reference to artisan knowledge can ensure that an attorney's construction is not founded on an incorrect understanding of the patent's technological disclosure, and can help to discourage claim constructions that are technologically absurd.²⁸⁸

285. Cf. STANLEY FISH, *DOING WHAT COMES NATURALLY: CHANGE, RHETORIC, AND THE PRACTICE OF LEGAL THEORY IN LITERARY AND LEGAL STUDIES* 153 (1989) (“Interpretive communities are no more than sets of institutional practices . . .”).

286. See *Foreword* to MPEP, *supra* note 64 (“This Manual is published to provide . . . patent examiners, applicants, attorneys, agents, and representatives of applicants with a reference work on the practices and procedures relative to the prosecution of patent applications before the USPTO.”).

287. See *supra* note 268 and accompanying text.

288. A rule disfavoring technologically nonsensical constructions is consistent with similar discouragement of absurd constructions in the interpretation of contracts and statutes. See, e.g., *FutureSource LLC v. Reuters Ltd.*, 312 F.3d 281, 284 (7th Cir. 2002) (“Nonsensical interpretations of contracts, as of statutes, are disfavored.”); *South Dakota v. Yankton Sioux Tribe*, 522 U.S. 329, 346 (1998) (adopting “a ‘sensible [statutory] construction’ that avoids [an] ‘absurd conclusion’” (quoting *United States v. Granderson*, 511 U.S. 39, 56 (1994))). Such a rule might have demanded a different result in the Federal Circuit case in which the term “polygonal” was construed to require a degree of geometric perfection beyond what the patent's own disclosure suggested it was even possible to attain. See *Int'l Rectifier Corp. v. IXYS Corp.*, 361 F.3d 1363, 1371 (Fed. Cir. 2004); see also *supra* text accompanying notes 19 to 21.

Moreover, a pure patent attorney rule would chafe against current practice in situations where claims explicitly or implicitly rely on the specification's technological disclosure or otherwise undisclosed understandings of the art. One set of such situations involves means-plus-function limitations, which make technological equivalents part of a claim's literal scope.²⁸⁹ Another set involves situations where the court needs an artisan to define terms of art²⁹⁰ — for example, by explaining how an ordinary artisan would measure a quantity specified by a claim where different techniques are plausible.²⁹¹ A further set involves situations where claims use terms such as “about”²⁹² or “effective amount”²⁹³ in ways that suggest reference to an associated technological condition or purpose.²⁹⁴

A pure patent attorney rule could obscure the need to make the technology-specific inquiry that such claim language suggests. Indeed, a pure patent attorney rule could even signal that such an inquiry is fundamentally illegitimate. It could demand that a claim requiring such an inquiry be held invalid for indefiniteness. Thus, a pure patent attorney rule might tend to impose unreasonable and excessively costly burdens on claim drafting. Predictable and sensible claim interpretation that does not rely on implicit technological understandings may be impossible.²⁹⁵ In any event, any argument that it is achievable goes well beyond the bounds of this paper.

289. See 35 U.S.C. § 112 para. 6 (2000).

290. See *Vanderlande Indus. Nederland BV v. ITC*, 366 F.3d 1311, 1321 (Fed. Cir. 2004) (“[W]here evidence — such as expert testimony credited by the factfinder, or technical dictionaries — demonstrates that artisans would attach a special meaning to a claim term . . . general-usage dictionaries are rendered irrelevant with respect to that term . . .”).

291. See, e.g., *OSRAM GmbH v. ITC*, 505 F.3d 1351, 1357 (Fed. Cir. 2007) (“When there is more than one method of measurement and the patent does not explicitly discuss the methods, persons experienced in the field are reasonably deemed to select the method that better measures the parameters relevant to the invention.”). *But cf.* *Cordis Corp. v. Medtronic AVE, Inc.*, 511 F.3d 1157, 1168–69 (Fed. Cir. 2008) (leaving unanswered whether “the methodology of measurement should have been deemed an issue of law for the court [i.e., a question of claim construction] rather than an issue of fact that was part of the infringement inquiry submitted to the jury”). In *Markman v. Westview Instruments, Inc.*, the Supreme Court characterized “construing a term of art following receipt of evidence” as a “mongrel practice.” 517 U.S. 370, 378 (1996).

292. *Ortho-McNeil Pharm., Inc. v. Caraco Pharm. Labs., Ltd.*, 476 F.3d 1321, 1327–28 (Fed. Cir. 2007) (determining that “about 1:5” should be construed narrowly in light of the intrinsic evidence, and then relying on expert testimony to set precise numerical bounds).

293. *In re Watson*, 517 F.2d 465, 477 (C.C.P.A. 1975) (holding that, because “[t]hose skilled in the art will be able to determine from the disclosure . . . what an effective amount of germicide is,” claim language requiring “an effective amount of [germicide]” was not indefinite).

294. See Nard, *supra* note 7, at 57 (observing that “the oft-used claim words ‘substantially equal to,’ ‘closely approximate,’ or ‘close to’ . . . are ambiguous when viewed contextually”).

295. Even while arguing that applicants should clarify claim meaning by specifying “reference sources, such as technical treatises or dictionaries,” to be used in construing claims, Miller, *supra* note 8, at 184, Joseph Miller has recognized that implicit

Reference to a hybrid perspective — that of a patent attorney with access to the knowledge of an ordinary artisan — would avoid such problems. The hybrid perspective would make the patent attorney's viewpoint dominant but would also provide for consultation of an artisan's knowledge. The result should be an approach to claim construction that combines proper respect for (1) a patent's intrinsic record, (2) established rules and conventions regarding claim construction, and (3) technological understanding. A hybrid perspective thus is well designed to foster interests not only in promoting uniformity and predictability, but also in ensuring that claim construction remains anchored in technological reality.

By making clear that the perspective of a patent attorney is primary, the hybrid perspective provides a well-defined starting viewpoint, one informed by publicly documented rules and the conventions of an active interpretive community. Members of this community would typically have less technological expertise than an ordinary artisan. Thus, they would be more likely to rely heavily on the specification to understand the nature of a claimed invention. The resulting emphasis on the specification would track an old intuition, re-embraced by the Federal Circuit in *Phillips*, that the patent's written description should be the primary aid to understanding claims.²⁹⁶

On the other hand, by explicitly referring to the artisan's knowledge, the hybrid perspective could help resolve longstanding questions about the legal or factual status of claim construction. The hybrid perspective could suggest to courts how to acknowledge the factual aspects of claim construction, while still viewing claim construction as primarily "legal." In applying the perspective of a patent attorney, a court would be acting substantially "legally." But when calling for factual information outside of the patent and its prosecution history (as a patent attorney might in the course of the attorney's work on a patent application), the court would be making a fundamentally factual inquiry.

The hybrid perspective might nonetheless be criticized for sacrificing methodological purity and failing to resolve precisely when and to what degree the knowledge of the artisan should be called upon to aid the patent attorney. But such criticism is blunted by a long history of patent attorneys acting as mediators between raw technological understanding and the claims' public notice function. The hybrid perspective may not be pure, but it is well designed to draw from the les-

understandings derived from context will necessarily be crucial to proper interpretation. *Id.* at 187 ("One cannot hope to understand the art-specific words in a patentee's claims correctly unless one keeps that particular technological context in mind.")

296. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1315 (Fed. Cir. 2005) (en banc).

sons of established practice. Understanding how the hybrid perspective operates will not require navigating in a vacuum.

Gillette Co. v. Energizer Holdings, Inc.,²⁹⁷ discussed in Part III.A, can be used to show how reference to a hybrid standard can guide claim construction. The key claim language in *Gillette* included words such as “comprising” that have special meanings within the arts of claim drafting and claim construction, but that generally do not have special meanings within any relevant technological art.²⁹⁸ The centrality of such language to the issue in *Gillette* accords with the hybrid perspective’s emphasis on a patent attorney’s view as the primary reference point for construction.

On the other hand, a patent attorney — or a legal system — interested in ensuring that a claim interpretation makes technological sense would not have stopped with consultation of this perspective. The attorney or system would check any technological assumptions that lay behind the interpretation. For example, in holding that the claim language did not exclude a four-blade razor, the *Gillette* majority assumed that the specification’s account of prior problems with multi-blade razors did not teach against such a four-blade embodiment.²⁹⁹ Indeed, the majority even stated explicitly that the disclosed “principles of progressive blade exposure and progressive blade span could apply equally to four or five blades.”³⁰⁰ This finding was a technological one that an attorney would appropriately resolve through consultation with an artisan.

Indeed, a patent attorney would likely ask an artisan multiple questions before making such a finding. Would an artisan have understood the problems with multi-blade razors to suggest that the solution in *Gillette*’s patent could not be extended to four-blade razors? How hard would the artisan have expected it to be to extend *Gillette*’s solution to more than three blades? If the artisan would have anticipated difficulty, would it derive simply from a need for significant effort or from a need for a further conceptual breakthrough? The attorney-plus-artisan perspective would encourage a court to demand that such questions be answered.

Of course, any rule requiring that claims be viewed from the perspective of an attorney is likely to be denounced as an attorney employment act. A rule that demands legal sophistication in claim interpretation might be criticized as yet another blow to the idea of a patent system for all — yet another “reform” that favors wealthy inventors or assignees who can afford the best legal representation. But

297. 405 F.3d 1367 (Fed. Cir. 2005).

298. *See id.*; *supra* notes 96–120 and accompanying text.

299. *See Gillette II*, 405 F.3d at 1371–72.

300. *Id.* at 1371.

such criticisms may be fundamentally misguided. More predictable, coherent, and transparent claiming rules and practices may provide the best hope for those of limited means to establish clear patent rights through the patent application process itself, a far cheaper process than patent litigation.³⁰¹ Moreover, patent law has already arranged itself in a way that places a premium on legal sophistication in claim drafting, patent prosecution, and claim construction. In this context, more forthright acknowledgment of claim construction's already "legal" perspective would do little to erode patent law "democracy" while offering the possibility of valuable gains in legal transparency, coherence, and predictability.

V. CONCLUSION

Courts are right to believe that judgments regarding claim meaning should be governed by an objective perspective different from the perspectives of both the patent applicant and an ordinary member of the public. Courts have erred, however, in assuming that the perspective for determining the breadth of patent rights must be the same as the ordinary artisan perspective used for assessing their validity. Neither the Patent Act nor policy demands such uniformity.

Patent claims are mostly of concern to lawyers and businesspeople, not to scientists and engineers. The primary object of patent claims is to clarify the legal scope of patent rights, not to convey technological know-how. Consequently, it makes little sense to add to the uncertainty of claims' meaning by placing at the threshold of claim interpretation the problem of guessing what characteristics a court will later find an ordinary artisan to possess. Both courts and the USPTO have demonstrated implicit understanding of this point by developing rules and conventions for claim construction that are more tailored to the perspective of a patent attorney working with an artisan than to the perspective of an artisan alone. To clarify the law and to eliminate unnecessary complication, courts should correct course and make clear that claim construction is governed by the perspective of a reasonable patent attorney or agent who has access to the knowledge of an ordinary artisan. This hybrid perspective properly acknowledges the compound nature of claim construction as a primarily legal exercise that may nonetheless possess significant technological aspects. It

301. Legal fees for patent prosecution typically amount to about \$10,000 to \$20,000. Comm. on Econ. of Legal Practice, *Report of Economic Survey*, 2007 AM. INTELL. PROP. L. ASS'N 21 (reporting median legal fees for an original application ranging from \$6500 to \$12,000, and for an amendment or argument ranging from \$1600 to \$3000). On the other hand, even a patent suit in which less than \$1 million is at stake typically requires a party to spend hundreds of thousands of dollars on legal services. *Id.* at 25.

should therefore promote a more coherent and stable claim construction jurisprudence with more predictable results.

This is not to say that adoption of the proposed hybrid standard will necessarily produce the best of all possible worlds. There is some awkwardness, however well justified, in any situation that calls for the recognition of different target audiences for different issues relating to the same legal instrument. And even a more coherent claim construction jurisprudence will leave room for uncertainty regarding the meanings of particular claims — enough, in all likelihood, for the state of claim construction law to continue to inspire complaint. But achievement of perfect predictability is not necessary for the hybrid perspective to produce significant good. By bringing greater coherence and transparency to the law and by suggesting how to limit the range of legally plausible constructions, adoption of this perspective should reduce the unpredictability of claim construction, and thereby permit enterprise and innovation to move forward with less uncertainty than in the past. Even if the attorney-with-artisan perspective will not ensure the best of all possible worlds, it can help us do better with the one we have.