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LEGITIMACY AND THE USEFUL ARTS

Craig Allen Nard*

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I. INTRODUCTION

We are living in a world of increasingly complicated and transient technology, a world that lends itself to scientific achievements capable of fundamentally altering the human condition.¹ Intellectual property

* Assistant Professor of Law, Marquette University School of Law (beginning fall 1997). I would like to thank Harold Edgar, Clarisa Long, Dennis Patterson, and Kathleen Rogers for their helpful comments on an earlier version of this Article. I also wish to acknowledge Judge Giles S. Rich, for whom I have had the honor of clerking and from whom I have learned a great deal about our patent system.

1. Nearly forty years ago, Hannah Arendt spoke of the "conditioning force" that is brought into our world by human endeavor:

Whatever enters the human world of its own accord or is drawn into it by human effort becomes part of the human condition. The impact of the world's reality upon human existence is felt and received as a conditioning force. The objectivity of the world — its object — or thing-character — and the human condition supplement each other; because human existence is conditioned existence, it would be

law, especially patent law, is instrumental to the advancement of this technology.² Indeed, the languages of patent law and technology are inextricably linked so that discourse within one requires fluency in the other.³ Of particular significance is that each technology possesses its own language that forms part of a unique relationship between the various technologies and the patent laws. It is these relationships that are relevant to patent validity determinations whereby patent claim language, technological practice,⁴ and the patent code all have a role to play.

The fundamental question this Article addresses is who should be primarily responsible for making patent validity determinations: the courts⁵ or the Patent and Trademark Office ("PTO")?⁶ Which entity

impossible without such things, and things would be a heap of unrelated articles, a non-world, if they were not the conditioners of human existence.

HANNAH ARENDT, *THE HUMAN CONDITION* 11 (Doubleday & Co. edition) (1958).

2. See, e.g., Edwin Mansfield, *Unauthorized Use of Intellectual Property: Effects on Investment, Technology Transfer, and Innovation*, in *GLOBAL DIMENSIONS OF INTELLECTUAL PROPERTY RIGHTS IN SCIENCE AND TECHNOLOGY* 107-45 (Mitchell B. Wallerstein et al. eds., 1993); Robert P. Merges, *Uncertainty and the Standard of Patentability*, 7 *HIGH TECH. L.J.* 1, 10-12 & nn.30-31 (1992) [hereinafter Merges, *Uncertainty*]; Suzanne Scotchmer, *Standing on the Shoulders of Giants: Cumulative Research and the Patent Law*, *J. ECON. PERSP.* 29 (1991); Zvi Griliches, *Patent Statistics as Economic Indicators: A Survey*, 28 *J. ECON. LIT.* 1661, 1673-74 (1990); Richard C. Levin et al., *Appropriating the Returns from Industrial Research and Development*, 3 *BROOKINGS PAPERS ON ECON. ACTIVITY* 783, 816 (1987) (citing lead time, "learning advantage, and sales and service effort" in addition to patents and commercial forces driving technology); Ariel Pakes & Zvi Griliches, *Patents and R & D at the Firm Level: A First Look*, in *R & D PATENTS AND PRODUCTIVITY* 55-72 (Zvi Griliches ed., 1984).

3. I do not mean to suggest that technological discourse is dependent on a linguistic knowledge of patent law. To fully appreciate the interplay between patent law and a particular technological discipline, one should have fluency in both.

4. In this Article, I use "technological practice" to mean not only the language and scientific principles underlying and pertaining to the relevant technology, but also the economic and business factors associated with research and development strategies.

5. The term "courts" includes both judges *and* juries.

6. Throughout this Article, it is important to keep in mind that when I refer to the PTO, I am not necessarily referring to the PTO in its present form. I am aware of the systemic problems and institutional distortions, or at least the perception of such, within the PTO. Internal improvement and modifications are crucial. For example, under my proposal the PTO would have to acquire a greater sense of business acumen so as to fully appreciate the economic and business factors behind research and development strategy. I envision a PTO comprising various technological centers, individual examiners, and adjudicative committees trained both legally and in a particular technology, including a sense of how research and development decisions are made from both the business and economic standpoint. Three things suggest that a firm foundation is in place: the structural relationship between the PTO and Article III courts; their relative expertise; and the potential, indeed the obligation, of the PTO to enhance their technical and legal skills. See *infra* Part III.B.3.

would best serve the constitutional goal of promoting the progress of the useful arts?

In attempting to answer this question, this Article applies the theoretical framework developed by Philip Bobbitt⁷ and Dennis Patterson.⁸ The thrust of this theory is the assertion that law is a social/linguistic practice wherein meaning is ascertained through use. Legal language does not obey the axioms of philosophical realism: it is not a representational medium that depicts how things are in the world; nor does a legal statement's meaning depend on knowing the conditions that make it true.⁹ Rather, the truth of a legal proposition is achieved by working within the law.

This approach can best be illustrated by looking to Bobbitt's "modal" approach to constitutional interpretation. Bobbitt identifies several forms of argument or "modalities" that comprise the practice of constitutional interpretation. According to Bobbitt, statements of constitutional law are true or legitimate only if the modalities are employed.¹⁰ These modalities are:

- Textual: looking to the meaning of the words of the Constitution alone, as they would be interpreted by the average contemporary "man on the street";
- Doctrinal: applying the rules generated by precedent;
- Historical: relying on the intentions of the framers and ratifiers of the Constitution; and
- Prudential: seeking to balance the costs and benefits of a particular rule.¹¹

7. See PHILIP BOBBITT, *CONSTITUTIONAL FATE* (1982) [hereinafter BOBBITT, *FATE*]; PHILIP BOBBITT, *CONSTITUTIONAL INTERPRETATION* (1991) [hereinafter BOBBITT, *INTERPRETATION*].

8. See DENNIS M. PATTERSON, *LAW AND TRUTH* (1996) [hereinafter PATTERSON, *LAW AND TRUTH*].

9. A recent review of Patterson's *Law and Truth* describes realism:

Realists believe that knowing the meaning of a proposition consists in knowing what facts in the world would make it true. For example, the statement "Dinosaurs became extinct because of climatic changes caused by a meteor striking the Earth," is true if and only if events in the distant past correspond with what the statement asserts. We may not know whether the statement is true, but that does not alter the fact that it is (or is not) true.

Michael C. Dorf, *Truth, Justice, and the American Constitution*, 97 COLUM. L. REV. 133, 144-45 (1997) (footnote omitted).

10. See BOBBITT, *FATE*, *supra* note 7, at 5.

11. See BOBBITT, *FATE*, *supra* note 7, at 7-8. Bobbitt provides several examples of how the modalities are applied. Of particular interest is their application to the nomination of Judge Robert H. Bork. See BOBBITT, *INTERPRETATION*, *supra* note 7 at 83-108.

Therefore, the truth of a legal assertion like "regulation X is unconstitutional" is proven not by recourse to events external to the law; rather, the truth is shown by working within the law (i.e., applying the modalities).¹²

As Dennis Patterson writes:

The most important aspect of the modalities is that it is only through their use that the truth or falsehood of legal claims is shown. Unlike the conventional perspective, which sees truth of law as a function of something lying outside the law (for example, politics, moral philosophy, etc.) the unique, and, if correct, compelling aspect of Bobbitt's account or our constitutional practice is that nothing is hidden. There is nothing more to constitutional law (or any other body or doctrine) than the use of the . . . modalities of argument.¹³

One of the virtues of Bobbitt's modalities is that they are open-ended and applicable to any area of the law, including patent law. Of significance to this Article's purpose is that application of this modal analysis to patent law reveals an additional modality unique to patent law, and, more importantly, sheds light on the question of who should be primarily responsible for making patent validity determinations.¹⁴

Indeed, patent law and technological development are best understood as linguistic practices,¹⁵ in that patent practice requires an understanding of each technology's dominant discourse, and vice versa. The process of understanding these linguistic practices is not an interpretive endeavor; rather, these practices can be viewed as social in nature with an emphasis on the way language is used in the social setting. As such, knowledge and meaning of patent law and technology are

12. BOBBITT, *FATE*, *supra* note 7, at 34, 151.

13. PATTERSON, *LAW AND TRUTH*, *supra* note 8, at 137.

14. Thus my focus is not so much on the utility of the modalities in patent law, for that much I assume. My concern is with *who* should be charged with employing the modalities, and it is this inquiry that sheds light on who should be primarily responsible for making patent validity determinations.

15. Patterson has argued in this vein in the context of commercial law. See Dennis M. Patterson, *Wittgenstein and the Code: A Theory of Good Faith Performance and Enforcement Under Article Nine*, 137 U. PA. L. REV. 335, 425-29 (1988) [hereinafter Patterson, *Wittgenstein and the Code*]; Dennis M. Patterson, *Law's Pragmatism: Law as Practice & Narrative*, 76 VA. L. REV. 937, 991-95 (1990) [hereinafter Patterson, *Law's Pragmatism*].

acquired linguistically by discerning the way in which their respective languages are used (e.g., claim language and technical language used in research and development schemes). This, in turn, is accomplished through the application of not only the above mentioned "modalities," but an additional modality: the *techno-patent dynamic*, which reflects a certain interplay between each industries' technological practice and the patent code.¹⁶ These modalities, as forms of argument, are the grammar of patent law and technological development. They allow us to understand that patent law and technological development are not theories; rather, they are inextricably linked practices, "and the modalities are the tools of the trade,"¹⁷ whose application maintains legitimacy in a legal regime.¹⁸ As per Bobbitt and Patterson, legitimacy means that the application of the modalities determines the truth or falsity of a legal assertion¹⁹ such as "Company X's biotechnology patent is invalid." Indeed, in a validity determination, claim language should not be viewed in isolation; rather, the entity charged with this determination should broaden its focus to include the relevant industry language and practice to which the claim language pertains.

Based on the assumption that the legitimacy of a legal regime is maintained by employment of the modalities,²⁰ the fundamental question this Article addresses is *who* is best suited to comprehend and employ these modalities in the context of validity determinations? In other words, who should be the grammarian charged with maintaining legitimacy with respect to issues of patent validity: the courts or the PTO?

My focus is on who best employs the modalities in patent law given that the property rights conferred by a patent are determined by the scope

16. See *infra* Part II.A.

17. Dennis M. Patterson, *Conscience and the Constitution*, 93 COLUM. L. REV. 270, 294 (1993) [hereinafter Patterson, *Conscience*].

18. Patterson states:

Legitimacy is not something a system of law can achieve writ large. The legitimacy of a legal system is an accretion; it develops over time and is maintained only by adherence to the legal forms of argument. To the extent that these modalities are compromised or ignored, particular decisions are illegitimate, and, over time, the legitimacy of the system as a whole is undermined.

PATTERSON, LAW AND TRUTH, *supra* note 8, at 138. I would also submit that the entity charged with employing the modalities is an important factor in maintaining legitimacy.

19. See *id.* at 70 (referring to modalities, Patterson states that "[it] is *in* their use that propositions of law are characterized as true or false.").

20. Indeed, the reasons *why* one should employ the modalities has been persuasively and eloquently expressed by Philip Bobbitt and Dennis Patterson. See generally BOBBITT, FATE, *supra* note 7; BOBBITT, INTERPRETATION, *supra* note 7; PATTERSON, LAW AND TRUTH, *supra* note 8.

or, metes and bounds, of one's invention as defined by a patent's *claim language*.²¹ The anticipated breadth of one's patent claims is crucial to one's present and future incentive to innovate. It follows, therefore, that the entity charged with ascertaining the meaning and validity of patent claims lies at the heart of a modern patent system.

None of the pending patent legislation²² addresses what I perceive to be a significant shortcoming of our current patent system: patent validity determinations inherent in our enforcement procedure.²³ Indeed, one must view somewhat suspiciously a patent system that requires federal district judges and lay juries to: (1) comprehend and ascertain the meaning of sophisticated technological art; (2) construe arcane patent claim language²⁴ in light of its characteristically lengthy and convoluted written record; and, in the end, (3) inform us as to whether the PTO

21. The claim is that "part of the patent that defines the technology which is the exclusive property of the patentee. A patent claim sets the bounds of the technical area within which the patent owner has the legal right to exclude others from making, using, and selling." J. THOMAS McCARTHY, DESK ENCYCLOPEDIA OF INTELLECTUAL PROPERTY 51 (2d ed. 1995) [hereinafter McCARTHY, DESK ENCYCLOPEDIA]. *Motion Picture Patents Co. v. Universal Film Mfg. Co.* argues:

The scope of every patent is limited to the invention described in the claims contained in it These so mark where the progress claimed by the patent begins and where it ends that they have been aptly likened to the description in a deed, which sets the bounds to the grant which it contains. It is to the claims of every patent, therefore, that we must turn when we are seeking to determine what the invention is, . . . [the patentee] can claim nothing beyond them.'

243 U.S. 502, 510 (1917) (citations omitted). See also *Zenith Lab., Inc. v. Bristol-Myers Squibb Co.*, 19 F.3d 1418, 1424 (Fed. Cir. 1994) ("It is the claims which define the metes and bounds of the invention entitled to the protection of the patent system.").

22. See, e.g., H.R. 400, 105th Cong. (1997) (21st Century Patent System Improvement Act of 1997: to modernize the PTO management, improve patent procedures, add protection for prior domestic users of patented technology, enhance protection of individual rights, and improve reexamination procedures); S. 507, 105th Cong. (1997) (Omnibus Patent Act of 1997: to establish the PTO as a privatized government agency and amend patent procedures relating to patent application, commercial use of patents, and patent reexamination).

23. By patent enforcement procedure, I mean the legal procedure by which patents are enforced and challenged in our federal court system, specifically the federal district courts.

24. Although the Supreme Court has held in *Markman v. Westview Instruments, Inc.*, 116 S. Ct. 1384, 1395 (1996), that claim construction is solely within the province of the court, the issue of infringement still requires the jury to decide whether the accused device infringes the claims of the patent in suit. Therefore, juries must comprehend the accused device and the technical language associated therewith. As Federal Circuit Judge Bryson stated, "because of the increasing popularity of jury trials in patent infringement cases, the issue of infringement by equivalents is often given to a jury that is unfamiliar with the principles of patent law, unschooled in the pertinent technology, and accorded only modest direction through general, pattern instructions." *Litton Systems, Inc. v. Honeywell, Inc.*, 87 F.3d 1559, 1580 (Fed. Cir. 1996) (Bryson, J., concurring in part and dissenting in part).

properly applied the patentability provisions of Title 35 that it encounters on a daily basis.

This deficiency of the present enforcement mechanism is exacerbated when it is viewed in light of the significant constitutional dimension underlying our patent laws. Indeed, Article I, Section 8, Clause 8 of the Constitution provides the benchmark by which our patent system must be evaluated and judged. This constitutional provision empowers Congress to "promote the Progress of . . . [the] useful Arts."²⁵ In light of such, we ask, as we must with respect to any legislation pertaining to our patent system: does the particular law or legal scheme in question promote the progress of the useful arts? My principal assertion is that the present enforcement procedure does not. To resolve this deficiency, I propose the incorporation of the PTO into the patent enforcement procedure beyond the present reissue and reexamination mechanisms.²⁶ The PTO should be the grammarian²⁷ charged with employing the modalities as a means of ascertaining the meaning and validity of patent claims.²⁸ Arguably, judges and juries do not have the requisite knowledge or information about the language of each technology and how that language relates to the patent code, nor the costs and benefits of research and development for each industry. Although the PTO is an imperfect agency, it is institutionally better positioned and better able to understand these considerations.²⁹

I propose that when a patent is litigated, the federal district court, after the close of discovery, should transfer the validity determination to the PTO and subsequently review the validity determination under the

25. U.S. CONST. art. I, § 8, cl. 8, states: "[The Congress shall have the power to] promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries." For a discussion on this clause, see generally Kenneth J. Burchfield, *Revisiting the "Original" Patent Clause: Pseudohistory in Constitutional Construction*, 2 HARV. J.L. & TECH. 155 (1989); Edward S. Irons & Mary Helen Sears, *The Constitutional Standard of Invention — The Touchstone of Patent Reform*, 1978 UTAH L. REV. 653; Giles S. Rich, *Principles of Patentability*, 28 GEO. WASH. L. REV. 393, 394-97 (1960); Karl L. Lutz, *Patents and Science: A Clarification of the Patent Clause of the Constitution*, 18 GEO. WASH. L. REV. 50 (1949).

26. See Marvin Motsenbocker, *Proposed Changes to Japanese and United States Patent Law Enforcement*, 3 PAC. RIM L. & POL'Y J. 389, 391 (1995) (arguing for a greater enforcement role for the respective patent offices of Japan and the United States).

27. See *supra* note 6.

28. Ideally, the United States should adopt an opposition-type proceeding during the patent prosecution stage, for such a proceeding would be *inter partes* in nature and result in a greater degree of confidence in one's property interest.

29. Although the present patent code does not explicitly require the PTO or judge to examine research and development, and innovation policy when passing on patent validity, I believe that a consideration of such is important. See *infra* note 94.

arbitrary and capricious standard or the framework established in *Chevron, U.S.A., Inc. v. Natural Resources Defense Council*.³⁰

In justifying my argument, I am informed by the philosophy of Ludwig Wittgenstein.³¹ For Wittgenstein, meaning and use go hand in hand. Wittgenstein asserted that "the speaking of a language is part of an activity."³² As Patterson put it, "[t]o understand human activities, . . . one must understand how the participants in the activity conduct it."³³ Of particular relevance to my proposition is that throughout the past 150 years there has evolved a certain techno-patent dynamic, my fifth modality, and the PTO has been key throughout this evolution. Therefore, I take the position that the PTO is the best available grammarian. It is suited to work with the grammar of patent law and technologi-

30. 467 U.S. 837 (1984). In *Chevron*, the Supreme Court held that:

If . . . the court determines Congress has not directly addressed the precise question at issue, the court does not simply impose its own construction on the statute, as would be necessary in the absence of an administrative interpretation. Rather, if the statute is silent or ambiguous with respect to the specific issue, the question for the court is whether the agency's answer is based on a permissible construction of the statute.

Id. at 843 (footnotes omitted). See also Craig Allen Nard, *Deference, Defiance, and the Useful Arts*, 56 OHIO ST. L.J. 1415 (1995) (arguing for *Chevron* deference to PTO patentability determinations).

31. I am primarily informed by Wittgenstein's *Philosophical Investigations*, published posthumously in 1953. *Philosophical Investigations* attempts to modify our perspective on how we view language, and is generally regarded as a repudiation of his 1923 work, the *Tractatus Logico-philosophicus*, in which he argued that language is representative of reality. According to Patterson:

[I]n his "first phase," Wittgenstein argued that language mirrored reality. Thus, the study of language could be a way of uncovering the logical structure of the world. In his "second phase," . . . Wittgenstein took up a whole new approach to philosophy. In this phase of his thought Wittgenstein concerned himself with the question of how language acts as a constitutive medium of understanding. Put succinctly, in his first phase, Wittgenstein believed that language pictured the world. In his second phase, Wittgenstein believed that language gave us a world.

Dennis M. Patterson, *Law's Practice*, 90 COLUM. L. REV. 575, 576 n.9 (1990). See also Thomas D. Eisele, "Our Real Need": *Not Explanation, But Education*, in WITGENSTEIN AND LEGAL THEORY 30 (Dennis M. Patterson ed. 1992) ("Wittgenstein's later philosophy is essentially concerned with understanding what we are doing when we act, speak, and think.").

32. LUDWIG WITGENSTEIN, *PHILOSOPHICAL INVESTIGATIONS* § 23 (G.E.M. Anscombe trans., 3d ed. 1958) (throughout this Article, punctuation as in original) [hereinafter WITGENSTEIN, *INVESTIGATIONS*].

33. Dennis M. Patterson, *Wittgenstein and Constitutional Theory*, 72 TEX. L. REV. 1837, 1844 (1994).

cal development. It is strategically positioned³⁴ to linguistically delve into the relevant patent and technological cultures, and ascribe meaning to the languages employed within these cultures.³⁵

This Article is divided into two parts. In Part II, I discuss the later philosophy of Ludwig Wittgenstein and its relevance to patent law, specifically claim interpretation and validity. In Part III, I explore the application of Wittgenstein's philosophy in the context of claim interpretation and validity and seek to show how the PTO should be given a great deal more deference in the patent enforcement mechanism as it pertains to validity determinations.

II. LEGITIMACY AND PATENT ENFORCEMENT PROCEDURE: WORKING FROM WITHIN

[T]he meaning of a word is its use in the language.³⁶

A. Wittgenstein and the Law

Before we explore how Wittgenstein informs our understanding of the law, it would be helpful briefly to discuss his approach to philosophy.³⁷ Although the notion that there are two Wittgensteins is a

34. Wittgenstein refers to this perspective as "perspicuous representation":

A main source of our failure to understand is that we do not *command a clear view* of our words. Our grammar is lacking in this sort of perspicuity. A perspicuous representation produces just that understanding which consists in 'seeing connexions'. Hence the importance of finding and inventing *intermediate cases*.

The concept of a perspicuous representation is of fundamental significance for us. It earmarks the form of account we give, the way we look at things. (Is this a 'Weltanschauung'?)

WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, § 122.

35. Wittgenstein states:

We must do away with all *explanation*, and description alone must take its place. And this description gets its light, that is to say its purpose, from the philosophical problems. These are, of course, not empirical problems: they are solved, rather by looking into the workings of our language, and that in such a way as to make us recognize those workings: *in despite of an urge to misunderstand them*.

Id. § 109. This non-positivistic approach allows the PTO to assume the role of a linguistic archeologist armed with modal tools in search of meaning based on use. As Dennis Patterson states, "'reality' does not come prepackaged." PATTERSON, LAW AND TRUTH, *supra* note 8, at 169.

36. WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, § 43.

37. Wittgenstein also wrote in the fields of psychology and mathematics. See LUDWIG WITTGENSTEIN, REMARKS ON THE PHILOSOPHY OF PSYCHOLOGY (G.E.M. Anscombe & G.H. von Wright eds., G.E.M. Anscombe trans., 1980); and LUDWIG WITTGENSTEIN,

subject of debate,³⁸ much of Wittgenstein's work throughout his career was devoted to the understanding and use of language.³⁹

Wittgenstein's post-Tractarian philosophy⁴⁰ — after 1929 — eschewed the demand for Platonic certainty and a unified theory of language, and posited that language is best understood as a labyrinth of interconnected practices.⁴¹ That is, the diversity and plurality of language make it impossible to discern a universal linguistic algorithm. For Wittgenstein, the “philosophical concept of meaning has its place in a primitive idea of the way language functions.”⁴² In contrast, “the meaning of a word is its use in the language.”⁴³ This notion is nicely illustrated by Wittgenstein's “five red apples” example found in his *Philosophical Investigations*:

I send someone shopping. I give him a slip marked “five red apples”. He takes the slip to the shopkeeper, who opens the drawer marked “apples”; then he looks up the word “red” in a table and finds a colour sample opposite it; then he says the series of cardinal numbers — I assume that he knows them by heart — up to the

REMARKS ON THE FOUNDATIONS OF MATHEMATICS (G.H. von Wright et al. eds., G.E.M. Anscombe trans., 1956).

38. See G. HALLETT, WITGENSTEIN'S DEFINITION OF MEANING AS USE 3 (1967) (“There is some disagreement as to whether there were two Wittgensteins or one.”); Patterson, *Law's Practice*, *supra* note 31, at 576 n.9 (“The question whether there is one Wittgenstein or two is endlessly debated.”).

39. See HALLETT, MEANING AS USE, *supra* note 38, at 3-4 (“[Wittgenstein's] work falls clearly into two periods. The first period began late in 1911 or early in 1912, when Wittgenstein arrived in Cambridge to study logic and the foundations of mathematics under Russell. . . . [Wittgenstein's second period began when he] returned to Cambridge and to philosophy in 1929.”).

40. See WITGENSTEIN, INVESTIGATIONS, *supra* note 32, § 43.

41. See generally ROBERT J. ACKERMAN, WITGENSTEIN'S CITY 47-66 (1988).

42. WITGENSTEIN, INVESTIGATIONS, *supra* note 32, § 2.

43. *Id.* § 43. Professors Baker and Hacker explain this “contextualism” as follows:

A sentence is akin to a move in chess, and a move is only a move in the context of a game. So even a sentence has no meaning in isolation. Understanding a language is the background against which a sentence acquires meaning, as understanding chess is for a move. A sentence is a position in the ‘game of language,’ hence to understand a sentence is to understand a language. Thus interpreted, the contextual dictum is directly connected with use. It is connected with structure only in so far as structure reflects use.

G.P. BAKER & P.M.S. HACKER, WITGENSTEIN: UNDERSTANDING AND MEANING 280 (1980); see also M. OAKESHOTT, *Political Education, in* RATIONALISM IN POLITICS AND OTHER ESSAYS 111, 129 (1962) (“We do not begin to learn our native language by learning the alphabet, or by learning its grammar; we do not begin by learning words, *but words in use.*”) (emphasis added).

word "five" and for each number he takes an apple of the same colour as the sample out of the drawer. — It is in this and similar ways that one operates with words. — "But how does he know where and how is he to look up the word 'red' and what he is to do with the word 'five'?" — Well, I assume that he *acts* as I have described. Explanations comes to an end somewhere. — But what is the meaning of the word "five"? — No such thing was in question here, only how the word "five" is used.⁴⁴

This example conveys Wittgenstein's belief that "the teaching of language is not explanation, but training."⁴⁵ The meaning of a word is discerned by demonstrating how it is used, that is, by observing the *activities* in which the shopkeeper is engaged.⁴⁶ In essence, Wittgenstein views these activities as the grammar of ideas, a grammar possessing certain conventions. He refers to this dynamic as a "language-game,"⁴⁷

44. WITGENSTEIN, INVESTIGATIONS, *supra* note 32, § 1.

45. *Id.* § 5. See also BAKER & HACKER, *supra* note 43, at 71 ("Language must speak for itself. Consequently, grammatical explanations presuppose a background of prior understanding, a partial linguistic competence. With language-learners such as we, explanation has a pedagogical role only after brute training has laid the foundations of elementary linguistic skills.")

46. See BAKER & HACKER, *supra* note 43, at 63:

Each of the three words in 'five red apples' has a different use, and this can be described without answering questions such as 'What is the meaning of the word "five"?' — where 'meaning' is thought to be given by specification of an entity. Of course, [Wittgenstein's] point is that there is nothing left to say about the meaning of 'five' (properly understood) after its use has been described. The meaning of a word is given by specification of its use, and this can be done without answering questions such as 'Of what is "five" the name?' or 'What does "five" stand for?'

47. WITGENSTEIN, INVESTIGATIONS, *supra* note 32, § 7. Wittgenstein states, "I shall also call the whole, consisting of language and the actions into which it is woven, the 'language-game.'" *Id.* By using the term "language-game," Wittgenstein seems to be suggesting that meaning is discerned from examining the interrelationship between language and its contextual setting. Theodore Schatzki notes:

A language-game consists both of the use of a particular element of language (word, expression, sentence, etc.) and of features of the activities in which instances of that use are embedded. . . . [T]he use of language is one element among many in our activities, which themselves are embedded in a matrix of interrelated actual and possible activities, the totality of which constitutes the form of life in which the user of language finds himself.

Theodore Schatzki, *The Prescription is Description: Wittgenstein's View of the Human Sciences*, in *THE NEED FOR INTERPRETATION: CONTEMPORARY CONCEPTIONS OF THE PHILOSOPHER'S TASK* 118, 126 (S. Mitchell & M. Rosen eds., 1983), *quoted in* Patterson,

whereby "the *speaking* of language is part of an activity, or of a form of life."⁴⁸ To understand an idea, one must examine the activities that are part of the idea.⁴⁹ Observing the application of words in action (i.e., activities), and not their origin, leads to understanding.⁵⁰ As Professor Dennis Patterson explains, for Wittgenstein, "[a]ll understanding begins in language, but to understand the grammar of a concept one needs to investigate the point(s) the concept serves in social practices (the activities into which it is woven), which practices must themselves be the focus of attention in any investigation of meaning."⁵¹

Wittgenstein's approach to language is not concerned with subject and object,⁵² for there is no mediating device between the activity and

Wittgenstein and the Code, *supra* note 15, at 361 n.84. See also H.L. FINCH, WITTGENSTEIN 44-45 (1995)

48. WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, § 23.

49. Baker and Hacker state that two of the most important features of Wittgenstein's language-games are "context" and "activity of the game." With respect to the former, Baker and Hacker write:

Like any other game, a language-game is 'played' in a setting. Wittgenstein's stress on the context of the game appears to be motivated by the wish to bring to the fore elements of linguistic activities which, while not obviously involved in the explanation of the meaning of constituent expressions[,] . . . are nevertheless pertinent to their meaning. At its most general the notion of context encompasses the presuppositions of meaning. If the context were significantly different, the game would not be played, for it would be pointless.

BACKER & HACKER, *supra* note 43, at 96-97 (citation omitted). And the "activity of the game" is related to "context," in that:

It is in the activities constitutive of a language-game that the point and purpose of linguistic expressions is evident. Concentration upon the activity which is the 'playing' of a language-game highlights the diversity of linguistic symbols, emphasizes their normal contexts of use, their normal (diverse) purposes, and the normal justifications for their use.

Id. at 97.

50. For Wittgenstein, study of the language-game "disperses the fog" so that one can "study the phenomena of language in primitive kinds of application in which one can command a clear view of the aim and functioning of the words." WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, § 5.

51. Patterson, *Wittgenstein and the Code*, *supra* note 15, at 363. See also FINCH, *supra* note 47, at 44 ("Grammatical remarks . . . are binding norms of language[:] conventional, historical, and changing In them . . . we see the meanings of a culture.").

52. Finch notes with respect to Wittgenstein's later philosophy:

[W]e should notice one fact of central importance, that the *unit of meaning* here already involves in one complex the three factors of *human beings*, a *world-setting* and *language*. So far as I know, this is the first time in Western thought when the starting point for thought was not, in however disguised a way, a subject and object, which a philosopher then attempted to relate to each other.

those engaged in the activity.⁵³ Take the example of a basketball coach who wants one of his players to “pass the ball” to a teammate. Assume that the coach simply says “pass the ball.” What is meant by “pass the ball”? If the player does not learn through training (i.e., practicing basketball with his coach) that to “pass the ball” means to give the ball to a teammate, the player may shoot the ball or throw the ball to a player on the opposing team. In another culture, “pass the ball” may very well mean deliver the ball to your opponent, or simply do nothing with it at all. The point is that we learn the meaning of “pass the ball” through training;⁵⁴ as Wittgenstein noted, “‘obeying a rule’ is a practice.”⁵⁵

B. The Grammarian as Gatekeeper

Central to the thesis I advance is that of the grammarian. Under Wittgenstein’s analysis, the grammarian does more than simply affix

FINCH, *supra* note 47, at 44.

53. This notion is in direct contravention to the views of Ronald Dworkin and Stanley Fish, both of whom assert that to properly understand language, there must be an interpreting interloper between the activity and participant. Dworkin’s understanding of the law is a matter of “constructive interpretation.” See, e.g., RONALD DWORKIN, *LAW’S EMPIRE* 52-3 (1986). Fish, however, focuses on the relevant community consensus. See, e.g., STANLEY FISH, *DOING WHAT COMES NATURALLY* 141 (1989). For Dworkin, “[a]ccording to law as integrity, propositions of law are true if they figure in or follow from the principles of justice, fairness, and procedural due process that provide the best constructive interpretation of the community’s legal practice.” DWORKIN, *LAW’S EMPIRE* 225. Thus Dworkin believes that “propositions of law are *made true* because they stand in a certain relationship to political theory.” Dennis M. Patterson, *Conscience and the Constitution*, 93 COLUM. L. REV. 270, 279 (1993). As for Fish, the meaning of a text is derived from the reader who is part of an interpretive community. For a proposition of law to be true for Fish, the interpretive community must come to some form of interpretive agreement. See FISH, *DOING WHAT COMES NATURALLY* 141. Thus, both Dworkin and Fish transcend the boundaries of legal practice in their search for the law’s proper meaning. For an excellent discussion of the debate between Dworkin and Fish, see PATTERSON, *LAW & TRUTH*, *supra* note 8, at 71-98.

54. See BAKER & HACKER, *supra* note 43, at 93 (“The foundation of the ability to play a game lies in training; the ability to play it is mastery of a technique. Playing games is a human *activity*, and its existence presupposes common reactions, propensities, and abilities.”). What is important to understand is that “different training . . . would have effected a quite different understanding.” See WITTGENSTEIN, *INVESTIGATIONS*, *supra* note 32, § 6.

55. WITTGENSTEIN, *INVESTIGATIONS*, *supra* note 32, § 202. As Baker & Hacker note: In many of his invented language-games Wittgenstein sketches the different kinds of training necessary for a participant to be able to play (e.g., memorizing words, memorizing the sequence of natural numbers, . . . etc.). This highlights the nature of rule-following, and the way in which the “gap” between rules and their application is bridged.

BAKER & HACKER, *supra* note 43, at 97.

labels to objects, for she is a linguistic mechanic using the tools of language in a contextual fashion. The ascription of meaning to a word is not accomplished through "ostensive definition,"⁵⁶ that is, merely pointing to an object and saying, "this is called 'x'." An ostensive definition of a word fails to inform how that word will be employed in future discourse⁵⁷ and only works if the grammarian has a "previously established linguistic framework."⁵⁸ As Wittgenstein writes, "[o]ne has already to know (or be able to do) something in order to be capable of asking a thing's name."⁵⁹ Yet,

[w]hat does it mean to say that we cannot define (that is, describe) these elements, but only name them? . . . For naming and describing do not stand on the same level: naming is a preparation for description. Naming is so far not a move in the language-game, any more than putting a piece in its place on the board is a move in chess. We may say: *nothing* has so far been done, when a thing has been named. It has not even *got* a name except in the language-game.⁶⁰

For Wittgenstein, ostensive definition only works in the context of an activity. This would be the case when a "child [comes] into a strange country and [does] not understand the language of the country; that is, as

56. See WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, § 28; see also FOGELIN, WITTGENSTEIN 115 (1992).

57. As Wittgenstein writes on the concept of ostensive definition:

'We name things and then we talk about them: can refer to them in talk.' As if what we did next were given with the mere act of naming. As if there were only one thing called 'talking about a thing.' Whereas in fact we do the most various things with our sentences.

WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, § 27. Baker and Hacker remark that "[t]he Augustinian conception takes for granted the general structure of language and how it is used, finds that this needs supplementation by ostensive definition or teaching of names, and wrongly jumps to the conclusion that everything about language follows from the correlation of names and objects." BAKER & HACKER, *supra* note 43, at 87. See also FOGELIN, WITTGENSTEIN, *supra* note 56, at 117 ("[A] person does not understand the meaning of a term unless he can use it correctly in regular discourse, that is, *beyond* the ostensive definition game.").

58. FOGELIN, *supra* note 56, at 118.

59. WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, § 30.

60. *Id.* § 49. This is not to suggest that Wittgenstein believes that explanations via ostensive definition are defective as compared to other forms of explanation. Rather, he seeks to demonstrate that ostensive definitions "do not lay the foundations of language." See BAKER & HACKER, *supra* note 43, at 171-72.

if it already [has] a language, only not this one. Or again: as if the child [can] already *think*, only not yet speak.”⁶¹

A PTO comprised of technological centers and individual examiners trained in each technology would be cognizant of, and informed by, present technological realities as reflected in the patent code in order to understand the meaning of language in patent law. Technology is perpetually transient; “new” inventions, building upon prior knowledge,⁶² are always coming to the fore, and what the claim language of these inventions mean and whether or not the invention described by claim language is valid (nonobvious) are inquiries that have their focus in the past *and* present.⁶³ Because the patent applicant can be her own lexicographer,⁶⁴ patent claim language, and the language of technology to which it is bound, are polysemous and in constant need of defining.⁶⁵ Indeed, these languages create their own realities with impudent sovereignty. As the court in *Autogiro Co. of America v. United States* stated, “[o]ften the invention is novel and words do not exist to describe it. The dictionary does not always keep abreast of the inventor. It cannot. Things are not made for the sake of words, but words for things.”⁶⁶

All that exist are names and labels (e.g., “obvious” and “RAM”). We turn yet again to Wittgenstein:

One thinks that learning language consists in giving names to objects. Viz, to human beings, to shapes, to colours, to pains, to moods, to numbers, etc. . . To repeat — naming is something like attaching a label to a thing. One can say that this is preparatory to the use of a word. But *what* is it a preparation for?

“We name things and then we can talk about them: can refer to them in talk.” — As if what we did next were given with the mere act of naming. As if there

61. WITGENSTEIN, INVESTIGATIONS, *supra* note 32, § 32.

62. See *Scotchmer*, *supra* note 2, at 1 (“Most innovators stand on the shoulders of giants, and never more so than in the current evolution of high technologies, where almost all technical progress builds on a foundation provided by earlier innovators.”).

63. Indeed, it has been said that “inventions are the result of social accretions to prior inventions.” JOSEPH ROSSMAN, *PSYCHOLOGY OF THE INVENTOR* 3 (1931).

64. See *Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 888 (Fed. Cir. 1984) (“It is the inventor applying for a patent who is permitted to be his own lexicographer.”); see also *Fromson v. Advance Offset Plate, Inc.*, 720 F.2d 1565, 1569 (Fed. Cir. 1983).

65. As Heraclitus stated years ago, “[y]ou could not step twice into the same river, for other waters are ever flowing on to you.” ASHTON APPLEWHITE ET AL., *AND I QUOTE* 466 (1992).

66. 384 F.2d 391, 397 (Ct. Cl. 1967).

were only one thing called "talking about a thing". Whereas in fact we do the most various things with our sentences. Think of exclamations alone, with their completely different functions.

Water!

Away!

Ow!

Help!

Fine!

No!

Are you inclined still to call these words "names of objects"?⁶⁷

One of Wittgenstein's primary themes is that "linguistic behavior reveals a motley of activities that can hardly be captured under the paradigms of naming and describing,"⁶⁸ for "an ostensive definition can be variously interpreted in every case."⁶⁹ Indeed, this is particularly applicable to patent law where, much like Lewis Carroll's *Alice in Wonderland* in which something means whatever one wants it to mean, the patent applicant can be her own lexicographer.⁷⁰ The implication of such is that a unitary theory of patent and technical language cannot exist.⁷¹

67. WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, §§ 26-7.

68. FOGELIN, *supra* note 56, at 111. As Baker & Hacker write:

The possibility of referring to things does not flow, as it were, from the mere act of naming. We do refer to, and talk about, things; but this is merely one of a multitude of speech activities which must be learnt. Naming is neither a preparation for this alone, nor is learning a name sufficient for being able to talk about something.

BAKER & HACKER, *supra* note 43, at 161. See also WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, § 11 ("Think of the tools in a tool-box: there is a hammer, pliers, a saw, a screw-driver, a rule, a glue-pot, glue, nails and screws. — The functions of words are as diverse as the functions of these objects. (And in both cases there are similarities.)").

69. WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, § 28.

70. See *Lear Siegler, Inc. v. Aeroquip Corp.*, 733 F.2d 881, 888 (Fed. Cir. 1984).

71. Norman Malcolm describes Wittgenstein's reasoning thus:

[After 1929] Wittgenstein came to the realization that "what we call 'proposition' and 'language' is not the formal unity that [Wittgenstein] had imagined but is a family of structures more or less related to one another." The implication of this perception was that there *could not be* a correct philosophical theory of language. If the concept of language is not a unitary concept, we should expect the same of the other concepts with which philosophy has struggled. If the word "cause", as it is actually used, does not have a uniform

With that in mind, instead of “exclamations,” let us substitute a sampling of words relating to patent validity and common technologies.

New⁷²

Useful⁷³

Invention⁷⁴

Publication⁷⁵

Obvious⁷⁶

Enable⁷⁷

employment, but an irregular one, then there cannot be a correct theory of the essence of causation. . . . The same holds for the concepts of *truth, representation, knowledge, justice, the good* and so on. Wittgenstein’s new insight into the actual working of language implies that the enterprise of philosophical analysis, as traditionally conceived, is based on a false assumption.

NORMAN MALCOLM, WITTGENSTEIN: A RELIGIOUS POINT OF VIEW? 43 (1993). The same could be said for patent and technical language, for example, where the statutory term “obvious” or “new” as applied to a claimed invention does not possess a unitary concept.

72. See 35 U.S.C. § 101 (1994) (“Whoever invents or discovers any new or useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.”).

73. See *id.*

74. See *id.*; see also 35 U.S.C. § 102(a)-(e), (g) (1994).

75. 35 U.S.C. § 102(a) & (b) (1994) provide:

A person shall be entitled to a patent unless —

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or
- (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States

76. 35 U.S.C. § 103 (1994) provides:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, 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 of ordinary skill in the art to which said subject matter pertains.

77. 35 U.S.C. § 112 (1994) provides:

The specification shall 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, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Expression⁷⁸

Vector⁷⁹

RAM⁸⁰

ROM⁸¹

Amide⁸²

Ester⁸³

Like "one-word exclamations," the range of meaning for these terms "is enormously varied."⁸⁴ Simply to label an invention "useful" or "obvious" does not inform us as to what "useful" and "obvious" mean; nor are we aware of the meaning of "invention."⁸⁵ When the computer industry employs the label "RAM," what does it mean by random access memory? What is an "ester"? There is no uniform employment of the statutory terms "obvious" and "useful," for these terms do not possess a pre-existing meaning that is interpreted; rather, the meaning of these words are ascertained through their use in patent law and in the technology.⁸⁶ Each technology has its own language and relates to the

78. The term "expression" is commonly used in the field of biotechnology to indicate the "[p]roduction of an observable phenotype by a gene — usually by the synthesis of a protein." BRUCE ALBERTS ET AL., *MOLECULAR BIOLOGY OF THE CELL* G-9 (3d ed. 1994).

79. The term "vector" is commonly used in the field of biotechnology to indicate "an agent (virus or plasmid) used to transmit genetic material to a cell or organism." *Id.* at G-23.

80. The acronym "RAM" stands for "random access memory."

81. The acronym "ROM" stands for "read only memory."

82. An amide is an organic compound containing the group $-CONH_2$ (the carbamoyl group). Amides are volatile solids that are formed by the reaction of ammonia with electropositive metals. *See* A *DICTIONARY OF CHEMISTRY* 28 (John Daintith ed., 3d ed. 1996).

83. An ester is an organic compound formed by a reaction between an alcohol and an acid. Esters have a variety of applications, including use in fragrances. *See id.* at 192.

84. *See* BAKER & HACKER, *supra* note 43, at 161.

85. *See* ROSSMAN, *supra* note 63, at 8 ("The term *invention* is one of the most elusive words in the English language.").

86. Justice John Marshall, in attempting to discern the meaning of the word "necessary," stated:

If reference be had to its use, in the common affairs of the world, or in approved authors, we find that it frequently imports no more than that one thing is convenient, or useful, or essential to another. . . . Such is the character of human language, that no one word conveys to the mind, in all situations, one single definite idea; and nothing is more common than to use words in a figurative sense. Almost all compositions contain words, which, taken in their rigorous sense, would convey a meaning different from that which is obviously intended. It is essential to just construction, that many words which import something excessive, should be understood in a more mitigated sense — in that sense which common usage justifies.

McCulloch v. Maryland, 17 U.S. 316, 413-14 (4 Wheat. 1819).

patent law differently. Take a recent issue in the field of biotechnology: whether a DNA sequence is obvious in light of a prior art protein for which it codes. The Federal Circuit has held that the DNA sequence is not obvious.⁸⁷ However, this determination turns on whether the court views the issue in terms of structural chemistry or biology. If the former prevails, the sequence is nonobvious, according to the court; but, given the current state of biotechnology, the PTO's position was that the relevant technology for obviousness purposes is biology, and thus the sequence is obvious.⁸⁸

Thus, when Congress enacted § 103 of the patent code, or when an inventor claims a DNA sequence, these mere acts alone do not give meaning to the statutory and claim language, respectively. Rather, it is the *practice* of reading statutes and claim language in the context of the relevant technology that provide us with meaning.

With the above in mind, Wittgenstein's approach to language informs us as to how words in a legal text are meaningful. By working within the text itself and participating in the activities associated therewith, one does not so much interpret the words in the text through a mediating lens as discern their meaning from engaging and focusing on the practices in which these words are used. For example, in the context of patent law, how do we know when an invention is "obvious" or "enabling"? What do we mean by the words "obvious" and "enable"? What does "expression" mean in the field of recombinant DNA? What are "disassembly gates" in the technological realm of computers and electronics? A Wittgenstein devotee would assert that "the teaching of language is . . . training,"⁸⁹ and "the meaning of a word is its use in the language";⁹⁰ this implies that for claim interpretation and validity determination the claim language should be read in the light of the relevant industry practice as this practice and the patentability provisions (e.g., § 103) have a certain dynamic relationship from which a patent claim emerges.

This Article focuses on *who* has the best understanding of the grammar (i.e., the modalities) of patent law and the technological language used in patent law. Using Wittgenstein's insight that meaning is to be found in use, this implies that this entity should be primarily responsible for patent validity determinations and claim interpretation.

87. See *In re Bell*, 991 F.2d 781 (Fed. Cir. 1993); *In re Deuel*, 51 F.3d 1552 (Fed. Cir. 1995).

88. This is explored more thoroughly in note 95 and accompanying text.

89. WITGENSTEIN, INVESTIGATIONS, *supra* note 32, § 5.

90. *Id.* § 43.

III. POSTMODERNISM AND PATENT VALIDITY

*The semantics of the vocabulary of patent law, should that subject ever be adequately studied, would show that those who attempt to discuss the patent system, . . . whether as friends or foes of the patent system, are subject to a tyranny of words.*⁹¹

A. A Postmodern Framework

1. The Modalities of Patent Validity Determinations

There are five modalities that pertain to the practice of patent law. Four of these modalities were articulated by Philip Bobbitt in the context of constitutional law.⁹²

In addition, I posit a fifth modality, unique to patent law, that I refer to as the "techno-patent dynamic," and which pertains to the interplay between the patent code, technological language, underlying principles, and research and development strategies of the various technologies (i.e., technological practice).⁹³ For example:

The standard of patentability is assumed to have behavioral effects [on research and development ("R&D") decisions] and thus merits careful review. Firms will say, "Look, Firm A got a patent for doing that risky research; let's do some risky research ourselves." There are several reasons to believe the patent standard has such effects. Detailed case studies show that almost every firm at least tries to evaluate the cost effectiveness of proposed research and development projects. R&D managers also consider "patentability" or "patent strength" prior to investing in R&D projects. Thus the prospect of getting a patent may enter into the *initial* project investment or selection choice. If so, the

91. Giles S. Rich, *The Relationship Between Patent Practices and the Anti-Monopoly Laws*, 24 J. PAT. & TRADEMARK OFF. SOC'Y 85, 85-86 (1942).

92. Historical, textual, doctrinal, and prudential. See *supra* PART I; BOBBITT, FATE, *supra* note 7.

93. See *supra* note 4. Bobbitt explains that the modalities "often work in combination. Some examples fit under one heading as well as another." *Id.* at 8. Instead of creating an additional modality, I could just as easily have incorporated the techno-patent dynamic modality within the prudential modality, as the latter is very broad. However, by isolating a new modality, I believe that my thesis is better served by sharpening the focus of the reader's attention on the dynamic relationship between the patent law and industry.

standard of patentability enters at this stage. Even for firms whose research proceeds further before making a detailed cost/benefit analysis, patentability might enter in the very rough (and sometimes implicit) economic feasibility decisions made by the R&D department at the outset of the research project.⁹⁴

Applying the modalities, particularly the techno-patent dynamic, requires facility in the appropriate technological and patent "lexicons." With respect to the former, it is readily apparent that each technology has its own language and relates to the patent code differently. Witness the topical issue that I touched upon earlier, of whether a DNA sequence is obvious in the light of the prior art protein (i.e., amino acid sequence) for which it codes.⁹⁵ The PTO, specifically the Board of Patent Appeals and Interferences ("the Board"),⁹⁶ has held that "once the amino acid

94. Merges, *Uncertainty*, *supra* note 2, at 10-12. Zvi Griliches concurs: [T]here is quite a strong relationship between R & D and the number of patents received at the cross-sectional level, across firms and industries. The median R-Square is on the order of 0.9, indicating that patents may indeed be a good indicator of unobserved inventive output. . . . [T]he evidence is quite strong that when a firm changes its R & D expenditures, parallel changes occur also in its patent numbers.

Griliches, *supra* note 2, at 1673-74. See also Pakes & Griliches, *supra* note 2; Robert P. Merges and Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839, 878 (1990) (referring to the relationship between research and development expenditures, invention, and productivity growth, the authors state that "increases in research and development expenditures yield more inventions.") (footnotes omitted).

95. Perhaps a brief background on certain DNA principles will facilitate the examination of this issue. Genetic information is contained in chromosomes. Chromosomes consist of various accessory proteins and two strands of deoxyribonucleic acid ("DNA"). The two linked strands of purine and pyrimidine bases, known as nucleotides, hydrogen bond with each other to form a double helix. Certain portions of the DNA encode for various proteins, which comprise several amino acids. That portion of the DNA which codes for a protein is called a gene. Within each gene there are strings of triplet nucleotides called codons (three nucleotides comprise a codon), which specify for each amino acid within a protein. The codons are translated into the regulatory and structural proteins that comprise various cell components. Gene expression of DNA results in the transcription of a messenger-ribonucleic acid ("mRNA") molecule which in turn is "translated" in a protein. See generally PETER H. RAVEN & GEORGE B. JOHNSON, *BIOLOGY* 280-364 (3rd ed. 1992); ALBERTS ET AL., *supra* note 78; ROGER L.P. ADAMS ET AL., *THE BIOCHEMISTRY OF THE NUCLEIC ACIDS* (11th ed. 1992).

96. The Board is an adjudicative body within the PTO that hears: (1) appeals from a patent examiner's decision refusing to issue a patent on a particular claimed invention; (2) questions of priority in interference proceedings between two or more inventive entities for the same invention; and (3) entitlement proceedings that determine whether the inventor or the federal government is the owner of a patent on an invention developed during work under the National Aeronautics and Space Administration. See MCCARTHY, *DESK*

sequence of a known useful protein is known, there is motivation for one of ordinary skill in the relevant art to construct a synthetic gene for biosynthesis of that protein."⁹⁷ In other words, the Board, applying biological principles, reasoned that the corresponding link between a gene (i.e., DNA sequence) and its encoded protein via the genetic code renders the gene obvious when the amino acid sequence is known.

However, the Federal Circuit does not see it this way. According to the court, even if one skilled in the art who knew the structure of the protein could use the genetic code to hypothesize possible structures for the corresponding gene, because of the "degeneracy"⁹⁸ of the genetic code there are a vast number of nucleotide sequences that might code for a specific protein.⁹⁹ The Federal Circuit, instead of following the Board by applying biological principles, applied principles of structural chemistry, which led to a finding of nonobviousness.

For purposes of this Article, there are two points to be made here. First, a different legal result is reached depending upon which technological practice is employed (i.e., biology or structural chemistry) because each practice has its own language and relates to the patent code differently. Second, the Federal Circuit's use of structural chemistry is dubious. While it is true that the degeneracy of the genetic code gives rise to a vast possibility of encoding nucleic acids, biotechnological investigators have devised certain strategies, which are well known in the art, to facilitate the isolation of the desired gene once the amino acid sequence is known.¹⁰⁰ This illustrates the application of the techno-

ENCYCLOPEDIA, *supra* note 21, at 43. For a history of the Board, see Michael W. Blommer, *The Board of Patent Appeals and Interferences*, AM. INTEL. PROP. L. ASS'N BULL., Dec. 1992, at 188; Paul J. Federico, *The Board of Appeals 1861-1961*, 43 J. PAT. OFF. SOC'Y 691 (1961); Paul J. Federico, *Evolution of Patent Office Appeals*, 22 J. PAT. OFF. SOC'Y 838 (1940).

97. *Ex parte Hudson*, 18 U.S.P.Q.2d (BNA) 1322, 1324 (Bd. Pat. App. & Interferences 1990).

98. "Degeneracy" refers to the fact that several different codons or nucleotide sequences may encode for the same amino acid. See ADAMS ET AL., *supra* note 95, at 519-24.

99. See *In re Bell*, 991 F.2d 781 (Fed. Cir. 1993); *In re Deuel*, 51 F.3d 1552 (Fed. Cir. 1995).

100. See *Ex parte Deuel*, 33 U.S.P.Q.2d (BNA) 1445 (Bd. Pat. App. & Interferences 1993), *rev'd* 51 F.3d 1552 (Fed. Cir. 1995). The Board stated:

Though those skilled in the art may be unaware of the exact chemical structure of a gene they are aware that it is composed of an unknown but established, relatively unchanging array of nucleotides which code for the particular protein. Importantly, they are also aware that the gene will hybridize with another DNA having the same assemblage of adjacent nucleotides for at least a portion of the gene. Those skilled in the art are also aware of established procedures for isolating the gene using the hybridization phenomenon. One such

patent dynamic: better understanding and application of the interplay between the patent code and the relevant technological practice (i.e., the scientific principles underlying biotechnology and the indirect effect on research and development,¹⁰¹ leads to a validity determination that maintains the legitimacy of our patent system — in this case, the obviousness of a DNA sequence.

Additionally, accompanying this dynamic is the evolution of various rules and customs¹⁰² pertaining to claim drafting,¹⁰³ i.e., the “patent

procedure, a probing technique, is taught in the [prior art]

. . . . Indeed, probing appears to have become so routine that appellants’ specification leaves the reader to determine the probing technique used and says nothing about the initial probe

Ex parte Deuel, 33 U.S.P.Q.2d (BNA) at 1448, 1450. See also Anita Varma & David Abraham, *DNA Is Different: Legal Obviousness and the Balance Between Biotech Inventors and the Market*, 9 HARV. J.L. & TECH. 53 (1996) (criticizing the Federal Circuit’s treatment of the DNA/protein issue as it relates to obviousness).

101. In *Ex parte Deuel*, the Board expressed concern about the scope of a patent covering a DNA sequence. According to the Board:

When a patent issues on the DNA which codes for the protein, the patent owner receives the exclusive right to the DNA and, practically speaking, to the preparation of commercial quantities of the protein which requires the DNA for its production. This is true whether or not isolation of the DNA is accomplished via routine or extraordinary techniques.

Ex parte Deuel, 33 U.S.P.Q.2d (BNA) at 1447. See also Varma & Abraham, *supra* note 100, at 55 (regarding “the obviousness relationship between DNA and proteins, the Federal Circuit’s guidance has upset the delicate balance between patentees and the market, and threatens the development of DNA-based technology.”).

102. As early as 1948, patent claims were characterized as “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 Patent and Trademark Office.” William Redin Woodward, *Definiteness and Particularity in Patent Claims*, 46 MICH. L. REV. 755, 765 (1948).

103. See Karl B. Lutz, *Evolution of the Claims of U.S. Patents*, 20 J. PAT. OFF. SOC’Y 457, 488 (1938). Deller adds:

Along with the development of the importance of the claim, there was another far-reaching change in the attitude of both the Patent Office and the courts as to the way in which claims should be drawn and interpreted. To appreciate this change, it is necessary to go back to the fundamental principles underlying the definition of what is new and the various modes of distinguishing what is new from what is old. Generally speaking, compliance with the requirements of the early statutes for a distinction between new and the old was not perfect. The problem of discovering in the early patents what invention was involved was a burden which was carried by the courts and the public. *The desirability of shifting this burden to the Patent Office and to the patentee himself soon became apparent.*

¹ ANTHONY WILLIAM DELLER, *PATENT CLAIMS* 11 (2d ed. 1971) (emphasis added).

In the leading treatise on claim drafting, Faber states that “claim drafting practices and

lexicon." Claim drafting is an art with a unique vocabulary. Indeed, there is a bargain inherent in our patent system whereby, in return for the right to exclude others from making, using, or selling the claimed invention, the inventor must disclose to society, through the use of

techniques . . . have grown up over the years by case law, [PTO] rules and memoranda, and, simply, custom" R.C. FABER, *LANDIS ON THE MECHANICS OF PATENT CLAIM DRAFTING* at xv (3d ed. 1990) (footnotes omitted). Examples of these "practices and techniques" are:

[1] [T]he standard custom as to sentence construction is that each claim must be the direct object of a single sentence, however long, beginning with a standard introductory phrase such as "I claim," "The invention claimed is," or the equivalent.

....

[2] When only one claim is presented, no numeral is used When more than one claim is submitted, each claim must start with an Arabic numeral (rule 75(f)). The claims must be numbered consecutively, and good practice dictates that the claims be grouped and numbered in a logical order for consideration (rule 75(f)). The usual practice is to begin with the broadest claim and proceed to the narrowest, and to group similar types of claims together.

....

[3] Most claims have "preambles," or introductory statements, the purpose of which is to name or define the thing that is to be claimed.

....

[4] Most ordinary combination claims require a transitional word or phrase between the preamble (naming the thing to be claimed) and the body of the claim (defining what the elements or parts of the thing are). Two recommended forms of transition that can be employed for most claims are the phrases: "which comprises" or "comprising." The word "comprises" has been construed to mean, in patent law, "including the following elements but not excluding others."

....

[5] Other transitions have more limited meanings. They are used primarily in chemical cases "Consisting" or "consisting of," especially in a mechanical claim, means that the claim covers devices that have the recited elements, and no more

....

[6] The body of a combination claim . . . comprises: (a) a recitation of "elements" of parts of the combination; and (b) a description of how the elements cooperate with one another structurally, physically, or functionally, to make up the operative combination recited in the preamble.

Id. at 5, 7, 8, 11, 12, 14 (footnotes omitted). See generally EMERSON STRINGHAM, *PATENT CLAIM DRAFTING* (2d ed. 1952).

claims, what she has invented. Needless to say, the meaning ascribed to and the validity of claims, *and* the entity charged with such tasks, are instrumental to a modern patent system.

This leads directly to the question this Article examines: *who* is in the best position to apply the modalities in the context of patent law. If the "most important aspect of the modalities is that it is only through their use that the truth or falsehood of legal claims is determined"¹⁰⁴ and legitimacy maintained, my concern is whether the PTO or the courts should be the gatekeepers of legitimacy. Before this is explored, however, I will demonstrate how the modalities would be applied in a typical validity determination.

2. Applying the Modalities

The following hypothetical will facilitate an understanding of how the modalities would be applied in a patent validity determination.

Marge invents a chemical composition. She files a patent application for her invention with the PTO. Marge claims a composition of matter comprising: (1) ARO1 Oxide; and (2) CRO1 Oxide.¹⁰⁵ Her invention relates to steel compositions. In her patent, Marge asserts that the use of CRO1 Oxide enhances the strength of the final steel product. After examining the relevant prior art (a *Scientific American* publication and a 1988 French chemical composition patent), the examiner issues the patent to Marge as U.S. Patent No. 111,111,111 ("111 patent"). Three years into the life of the patent, Marge discovers that her competitor, Homer, is making a form of steel using elements similar to those which are claimed in the '111 patent. Following further investigation, Marge writes Homer a cease and desist letter asserting that Homer is infringing her patent. Not surprisingly, Homer files an action seeking declaratory judgment, asserting that the '111 patent is invalid because it is obvious in light of a *Steel Monthly* article and the above mentioned 1988 French patent. The district court judge bifurcates the issues of validity and infringement because a finding of invalidity would be dispositive.

In this example, the decisionmaker is called upon to interpret the meaning of both the claim and the statutory law in order to evaluate Homer's obviousness assertion. The modalities focus the grammarian on the determinations used to establish whether this is a legitimate proposition of law.

104. Patterson, *Conscience*, *supra* note 17, at 294.

105. A typical, yet simplistic, claim for Marge's invention may read:

I claim a composition of matter, comprising:

- a. ARO1 Oxide; and
- b. CRO1 Oxide.

The Supreme Court, in *Graham v. John Deere Co.*,¹⁰⁶ articulated how § 103 should be approached. According to the Court:

Under § 103, the scope and content of the prior art are to be determined; differences between the prior art and the claims at issue are to be ascertained; and the level of ordinary skill in the pertinent art resolved. Against this background, the obviousness or nonobviousness of the subject matter is determined.¹⁰⁷

Thus, the grammarian must: (1) determine the "scope and content of the prior art"; (2) ascertain the meaning of the patent claim at issue; (3) ascertain the differences between the claim and prior art; (4) ascertain a "person of ordinary skill in the art"; and (5) ask whether the claimed invention would have been "obvious" to a person of ordinary skill in the art.

The textual modality encourages examination of the statute embodying the obviousness requirement:

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 of the invention was made to a person of ordinary skill in the art to which said subject matter pertains.¹⁰⁸

The textualist must also look to Marge's patent for linguistic clues about the breadth of the claim. The grammarian must also turn to other modalities, either explicitly or implicitly, to determine the obviousness of the claim.

The historical modality guides the grammarian to the legislative history of § 103 in order to better understand congressional intention. It will also encourage the grammarian to consult the history of steel compositions, where she may find that there is a history of using equivalent chemicals. Finally, she may examine the claim drafting rules and customs, and conclude that the patent was drafted narrowly.

The techno-patent modality will lead the grammarian to question the effects of particular patentability decisions on the steel industry and how those decisions will affect future research and development decisions.

106. 383 U.S. 1 (1965).

107. *Id.* at 17.

108. 35 U.S.C. § 103 (1994).

She should pay special attention to the unique characteristics of the technological practice, e.g., rapid change and specialized jargons.

The point is that the application of the various modalities illuminate how the legal language (e.g., "obvious") and technological language (e.g., "CRO1 Oxide") are used *in the relevant cultural context* and how they *relate to each other*.

B. *The PTO as Grammarian*

My thesis requires that the grammarian understands, or at least is institutionally positioned to understand, the relationship between patent and technical language on the one hand and the cultures to which they belong on the other.¹⁰⁹ That is, the grammarian maneuvers within the constantly evolving patent and technological realms, wherein reside activities pertinent to the respective practices of these realms. In short, the grammarian is well-equipped to apply the modalities.

The PTO as grammarian, it seems to me, has greater access to relevant epistemic considerations than the courts.¹¹⁰ It is better positioned to act as a gatekeeper of the patent and technological lexicons, with each examiner and Board¹¹¹ member (within a technological center) assuming the role of a lexicologist. In other words, the PTO should have primary responsibility for applying the modalities.

109. Keith Lehrer writes:

A theory of knowledge need not be a theory about the meaning of epistemic words any more than it need be a theory about how people come to know what they do. Instead, it may be one explaining what conditions must be satisfied and how they may be satisfied in order for a person to know something.

KEITH LEHRER, *THEORY OF KNOWLEDGE* 5 (1990). Patterson concurs:

In epistemology, . . . debate has shifted from questions regarding the indubitable grounds for knowledge to an attempt to specify the conditions under which one can rightly claim to have knowledge. The inclination to ask, not for the grounds of knowledge, but for the conditions under which assertions of knowledge will be accepted is informed by a distinct view of the relationship between language and the world.

Patterson, *Law's Pragmatism*, *supra* note 15, at 938.

110. A typical example of epistemic considerations are the factors that characterize a person of ordinary skill in the art. The factors include: (1) the educational level of the inventor; (2) the various prior art approaches employed; (3) the types of problems encountered in the art; (4) the rapidity with which innovations are made; (5) the sophistication of the technology involved; and (6) the educational background of those actively working in the field. See *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1382 (Fed. Cir. 1983).

111. See *supra* note 96 and accompanying text.

The PTO, more than any other patent related institution, understands that the grammar of patent law and technological development are ever in flux, their respective terms constantly changing.¹¹² Defining such terms from a perspective external to patent law and the relevant techno-patent dynamic is a virtually impossible task. The PTO possesses the institutional capacity to engage the various technological industries and develop an expertise for the technical language,¹¹³ and although a court may be able to learn this language, the PTO examiner has experience with the relevant technology. Indeed, the PTO as envisioned possesses a heightened form of cognizance or, in the words of Wittgenstein, "perspicuous representation."¹¹⁴ For these reasons, the PTO is the ultimate inside player, and is best suited to be the grammarian of patent law.

This does not diminish the significance of the federal district courts or the Federal Circuit, nor should there cease to be any type of judicial review. Indeed, I would not advocate a role for the PTO in determining whether an accused device infringes a claimed invention;¹¹⁵ rather, I am arguing that the PTO, subject to deferential judicial review, should be the primary grammarian responsible for determining the meaning and

112. This understanding is critical in the adjudicatory context. Professor Stroup writes:

[A]s Wittgenstein suggests, when the rules become more important than the context in which they are applied, 'things do not turn out as we had assumed.' When the context in which legal words are used changes drastically, cases with similar factual situations may not at all be alike, and to treat them as such might serve neither justice nor logic. Indeed, when legal language 'goes on a holiday' and the judge rigidly applies precedent without consideration for the language-game, or context, in which the words of statute or the Constitution are being used, he may well find himself entangled in his own rules, making distinction after distinction in order to make the factual situation fit the precedent, and in the end, clearly losing touch with the real needs of the community.

Daniel G. Stroup, *Law and Language: Cardozo's Jurisprudence and Wittgenstein's Philosophy*, 18 VAL. U. L. REV. 331, 352 (1984).

113. WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, § 199 ("To understand a sentence means to understand a language. To understand a language means to be master of a technique.").

114. *Id.* § 122. Describing Wittgenstein's "perspicuous representation," Thomas Eisele states:

So the challenge here is to bring all of this — what we have done and said, our actions and activities, and their imagined alternatives — to consciousness, to conscious inspection and reflection; then, perhaps we shall see what it is that we are doing and how we manage to do it.

Eisele, *supra* note 31, at 34.

115. This is especially true in light of the equitable nature of the doctrine of equivalents.

validity of patent claim(s) prior to the infringement analysis, which should remain within the province of the court.¹¹⁶

1. Wittgenstein and Claim Interpretation

I am suggesting that the PTO should be given primary responsibility for determining the validity of patent claims. A validity determination involves two steps. First, the claims (e.g., Marge's '111 patent) are construed; and second, the prior art (e.g., the *Steel Monthly* article and the French patent) is compared to the construed claims to discern whether the claims are met by the prior art (i.e., is the invention claimed in Marge's '111 patent anticipated or obvious in view of the prior art).¹¹⁷ Thus, the initial inquiry focuses on the *meaning* of claim language, which I have argued should not be viewed in isolation; rather, the claim language should be examined in the light of relevant technological practice and applicable patentability provisions. This initial inquiry is very important, for it is frequently dispositive and often leads to foregone conclusions with respect to validity and infringement determinations, inasmuch as the parties base their entire case on their respective versions of what a claim means.¹¹⁸ In other words, "[o]nce you have construed

116. Whether a judge or jury should decide the issue of infringement is beyond the scope of this Article.

117. See *Beachcombers v. Wildewood Creative Prods., Inc.*, 31 F.3d 1154, 1160 (Fed. Cir. 1994); *Elmer & HTH, Inc. v. ICC Fabricating, Inc.*, 67 F.3d 1571, 1574 (Fed. Cir. 1995). As with validity, an infringement determination also entails claim construction. In *Snellman v. Ricoh*, the Federal Circuit said:

The determination of infringement is a two-step process. First, the meaning of the claim alleged to have been infringed must be determined. Second, the alleged infringing device must be compared to the claims to determine whether the claims cover the device, either literally or under the doctrine of equivalents.

Snellman v. Ricoh Co., 862 F.2d 283, 286 (Fed. Cir. 1988). See also *Smithkline Diagnostics, Inc. v. Helena Lab. Corp.*, 859 F.2d 878, 889 (Fed. Cir. 1988).

118. See, e.g., *Key Mfg. Group, Inc. v. Microdot, Inc.*, 925 F.2d 1444, 1448 (Fed. Cir. 1991) ("Improper claim construction can distort the entire infringement analysis."); *MCV, Inc. v. King-Seeley Thermos Co.*, 870 F.2d 1568, 1570 (Fed. Cir. 1989) ("Although we do not reach it, the dispositive issue on the merits would be the definition of the invention, . . ."); *Paeco, Inc. v. Applied Moldings, Inc.*, 562 F.2d 870, 876 (3d Cir. 1977) ("Of the several complex questions concerning the proper interpretation of Claim 2, one is dispositive."); *Elf Atochem N. Am., Inc. v. Libbey-Owens-Ford Co.*, 894 F. Supp. 844, 859 (D. Del. 1995) ("Not surprisingly, resolution of the claim interpretation issue often resolves the infringement issue, as it will in this case."); *Lucas Aerospace, Ltd. v. Unison Indus., L.P.*, 890 F. Supp. 329, 332 n.3 (D. Del. 1995) ("[C]laim construction more often than not determines the outcome on infringement."). See also Edward G. Poplawski & Paul D. Tripodi, II, *The Impact of Federal Circuit Precedent on the "On-Sale" and "Public-Use" Bars to Patentability*, 44 AM. U. L. REV. 2351, 2391 n.46 (1995) ("Because in many cases a trier of fact's determination of the meaning of the claims may be dispositive of

the scope of the claim, that's the end of the game."¹¹⁹ However, the degree of difficulty of the second step of the validity determination should not be understated, for the claim language must be compared to the prior art, whether it is a publication or a patent. The language of this prior art must be given meaning, and therefore, like the claim language to which it is being compared, should be viewed in the light of relevant industry practices at the time the prior art was created (i.e., the effective date).

a. The PTO and the Technological Community

In *Markman v. Westview Instruments, Inc.*,¹²⁰ the Supreme Court held that a judge is better able than a jury to decide issues of claim construction. This holding has led to so-called "Markman hearings," whereby the claims of the patent-in-suit are construed before the issues of validity and infringement are tried.¹²¹

However, one cannot define the words "obvious" and "CRO1 Oxide" without some contextual setting. To ask what "obvious" and "CRO1 Oxide" mean in a vacuum is akin to Socrates inquiring as to the meaning of virtue. There is no Platonic precision in patent law. Marge's claimed invention must be viewed, *inter alia*, in light of the prior art and of a person of ordinary skill in the art — that much the statute (§ 103) tells us. However, our fuzzy "obviousness" picture needs more resolution. One can gradually add resolution by focusing on how the terms "obvious" or "CRO1 Oxide" are used. Recall Wittgenstein's assertion that "the meaning of a word is its use in the language";¹²² and his belief that "the teaching of language is not explanation, but training."¹²³

Indeed, there is a relativistic flavor to claim interpretation insofar as the meaning of claim language is relative to, and inseparable from, the technological context from which it arises. Claim language, like any

infringement, and to a somewhat lesser extent validity, bench trials and summary judgments can be expected to increase."); Kenneth E. Krosin & Timothy R. DeWitt, *En Banc Decisions of the Federal Circuit*, 423 PLI/Pat 831, 848 (1995) ("Since many cases are decided on the basis of claim construction, those cases likely will be decided in the summary judgment phase.").

119. This statement was made by a patent expert in the private bar. Linda Greenhouse, *Ruling Curbs Jury's Role on Patents*, N.Y. TIMES, April 24, 1996, at D1 (quoting Bo Pasternak of Choate, Hall & Stewart in Boston).

120. 116 S. Ct. 1384, 1395 (1996).

121. See, e.g., *Loral Fairchild Corp. v. Victor Co. of Japan*, 906 F. Supp. 798, 802 (E.D.N.Y. 1995); *Elf Atochem*, 894 F. Supp. at 850.

122. WITGENSTEIN, INVESTIGATIONS, *supra* note 32, § 43.

123. *Id.* § 5.

language, is inherently indeterminate;¹²⁴ as Learned Hand appropriately quipped, claims sometimes appear to be a "wilderness of words."¹²⁵ Due to this lack of self-evidence, parties frequently offer expert testimony as to the meaning of the claim in issue.¹²⁶ One Ph.D. after another is ushered before the court, each advancing her own narrative account of the meaning of the claim.¹²⁷

This notion of relativism was confronted by Wittgenstein, for he posited that the meaning of a word is in the activity that gave birth to the word. Again, the "meaning of a word is its use in the language," not "in the mind."¹²⁸ Borrowing a phrase from commercial law, to ascertain the meaning of claim language the grammarian must look to the parties' "course of conduct," or more specifically, "technological practice."¹²⁹

The grammarian should be a participant in the technological practice and be familiar with patent law and how it applies to the claim language representative of that practice.¹³⁰ As such, a strong argument can be

124. As Learned Hand memorably stated about the claims of a particular patent: "It takes the scholastic ingenuity of a St. Thomas with the patience of a yogi to decipher their meaning . . ." *Victor Talking Mach. Co. v. Thomas A. Edison, Inc.*, 229 F. 999, 1001 (2d Cir. 1916). The *Elf Atochem* court stated that:

If the meaning of words in a claim to describe an invention . . . are not in dispute then claim construction is a fairly simple process. In practice, however, parties rarely agree as to the meaning of the claim terms. . . . As to these words, the patent owner will propose a meaning that precisely describes the accused product or process. The accused infringer will do just the opposite.

894 F. Supp. at 858-59.

125. *Victor Talking Mach.*, 229 F. at 1001.

126. See *Advanced Cardiovascular Sys., Inc. v. Scimed Life Sys., Inc.*, 887 F.2d 1070, 1076 (Fed. Cir. 1989) ("The purpose of expert testimony is to provide assistance to the court in understanding, when the claims are technologically complex or linguistically obscure, how a technician in the field, reading the patent, would understand the claims.").

127. See *Lucas Aerospace, Ltd. v. Unison Indus., L.P.*, 890 F. Supp. 329, 332 n.3 (D. Del. 1995) ("Much of the trial testimony consisted of competing expert explanations of claim constructions.").

128. WITTGENSTEIN'S LECTURES AT CAMBRIDGE, 1930-32, at 25 (Desmond Lee ed. 1980).

129. See *supra* note 15 and accompanying text.

130. Thomas Eisele states:

[O]ur practical mastery of the institution and technique of language — of relating words to the world (and the world to words) — consists in knowing our ways around this enormously complicated and intricate form of life, being able to negotiate its terms and passages and conditions, knowing how to call upon and invoke (or how to withhold appropriately) words made available to us by our language in the contexts and circumstances presented us in this world. These anticipated and ensuing norms of our natural language (which Wittgenstein calls our "criteria" and "grammar") instantiate and inscribe our linguistic practice. They are that we need to get to

made that the PTO should be the grammarian, for the PTO is institutionally positioned and trained in the relevant patent and technological activities.¹³¹ The PTO is contextually embedded and provides litigants with a contextual forum imbued with community custom. The PTO understands that meaning is culturally related. Even if one argues that a judge has the benefit of expert witnesses and that he will be better able to assess the coherence of expert testimony than a participant trained in the relevant technological practice, the PTO, as I envision it, is still superior because it could dispense with the inevitably partisan expert witnesses. The PTO adjudicator himself would be, or be assisted by, an impartial expert with greater objectivity. Furthermore, vesting validity determinations with the PTO would provide for a greater degree of certainty early in the enforcement process. Knowing what the claim means at an early stage, coupled with narrow judicial review, may have the effect of inducing the parties to settle.

In deciding that "judges, not juries, are the better suited to find the acquired meaning of patent terms," the *Markman*¹³² Court reasoned that:

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. The judge, from his training and discipline, is more likely to give a proper interpretation to such instruments than a jury; and he is, therefore, more likely to be right, in performing such a duty, than a jury can be expected to be."¹³³

know better, that of which we need to get a more perspicuous view.

Eisele, *supra* note 31, at 36.

131. Karl Llewellyn, in the context of commercial law, understood that commercial practices are inseparable from their social context.

Like Wittgenstein, Llewellyn was concerned with the relationship between words and the activities of which they are a part. Llewellyn argued that in applying commercial standards, members not of the community at large but of the class of merchants were most likely to reach valid judgments, because these persons were most familiar with the nuances of everyday, evolving commercial practices.

Dennis Patterson, *Good Faith, Lender Liability, and Discretionary Acceleration: Of Llewellyn, Wittgenstein, and the Uniform Commercial Code*, 68 TEX. L. REV. 169, 206 (1989).

132. *Markman v. Westview Instruments, Inc.*, 116 S. Ct. 1384 (1996).

133. *Id.* at 1395 (citation omitted) (quoting *Parker v. Hulme*, 18 F. Cas. 1138, 1140 (C.C.E.D. Pa. 1849) (No. 10,740)).

Although I agree with the Court that a judge is better suited than a jury to ascertain the meaning of claim language, I would argue that the PTO is "likely to do better than jurors [and judges]"¹³⁴ because the PTO, unlike the federal judiciary,¹³⁵ employs individuals with "training in exegesis" in the fields of patent law and technology,¹³⁶ and these individuals have "special training and practice" that places them at the center of the techno-patent dynamic. Indeed, patent law and technological development are nothing more than *linguistic practices* in which PTO examiners are *trained*.

The Court reasoned further that "in these cases a jury's capabilities . . . to reflect community standards [are] much less significant than a trained ability to evaluate the testimony in relation to the overall structure of the patent."¹³⁷ I would agree with the Court if what they mean by "community" is Main Street U.S.A., for such a community is essentially irrelevant to claim interpretation. However, in some sense,

134. Difficult cases and issues have always plagued the judiciary. As Justice Jackson stated: the Supreme Court acts "in these matters not by authority of our competence but by force of our commissions." *West Virginia State Bd. of Educ. v. Barnette*, 319 U.S. 624, 640 (1943).

135. One can argue that the Federal Circuit was created as a specialized court armed with the requisite expertise to handle patent cases. However, I do not believe that this argument carries the day. First, a majority of judges on the Federal Circuit possessed little if any technological and patent experience before coming to the bench. Second, the legislative history makes it clear that it was not the intention of Congress to make the Federal Circuit a "specialized court." See H.R. REP. NO. 97-312 (1981).

By combining the jurisdiction of the two existing courts along with certain limited grants of new jurisdiction, the bill creates a new intermediate appellate court markedly less specialized than either of its predecessors and provides the judges of the new court with a breadth of jurisdiction that rivals in its variety that of the regional courts of appeal. The proposed new court is not a "specialized court." Its jurisdiction is not limited to one type of case, or even two or three types of cases. Rather, it has a varied docket spanning a broad range of legal issues and types of cases.

Id. at 19. See also S. REP. NO. 97-275, at 6 (1981). The primary reason behind the creation of the Federal Circuit was to prevent forum-shopping and to promote patent uniformity. See H.R. REP. NO. 97-312 at 20-22 (1981). These policies are not frustrated by incorporating the PTO into the enforcement mechanism. Lastly, focusing on the Federal Circuit ignores the significant advantage (e.g., inducing settlement) of having certainty early on in the enforcement process.

136. See Victor G. Savikas, *Survey Lets Judges Render Some Opinions About the Patent Bar*, NAT'L, Jan. 18, 1993, at S7, cited with approval in Motsenbocker, *supra* note 26, at 419 ("U.S. District Court judges often do not have an understanding of the technical issues involved until they are well into the patent trial . . ."). According to Motsenbocker, "Savikas surveyed over 700 U.S. District Court judges and found that 41% felt that patent cases should be tried in a special patent court. Thirty-nine percent also felt that patent cases are too difficult to be tried by jury." *Id.* at 419, n.145.

137. *Markman v. Westview Instruments, Inc.*, 116 S. Ct. 1384, 1395 (1996).

community standards *are* essential in ascertaining the meaning of claim and technical language. The relevant community is the particular technological community in question, and neither judges nor juries are better able than the PTO to "reflect [technological] community standards."

With that in mind, the entity charged with determining validity should be able to transcend the technology and familiarize itself with industry practice and language, and how they relate to patent law. The economic literature on patents posits that the research and development decisions of certain industries are influenced by the prospect of patentability and by patentability standards.¹³⁸ This is part of the techno-patent dynamic. As Professor Merges states: "Indeed, because the [patentability] standard will influence [research and development] decisions, courts charged with interpreting the nonobviousness standard ought . . . to modify it where necessary to carry out the underlying goals of the patent system."¹³⁹

Although the courts should have an understanding of the impact of patentability standards, instead of speaking in terms of the "courts charged with interpreting" these standards, it makes more sense from a Wittgensteinian perspective to charge the PTO with giving meaning to words such as "obvious" or "CRO1 Oxide." If language is learned through training and words are defined through use, then one of the major advantages of having the PTO serve as the grammarian is the fact that federal district courts, like all Article III courts, are institutionally

138. See *supra* note 2.

139. See Merges, *Uncertainty*, *supra* note 2, at 12.

removed from the day to day operations of the private industrial sector¹⁴⁰ and deal with patent problems only episodically.¹⁴¹

The PTO has the institutional capability to conduct public hearings specifically targeted to particular industries.¹⁴² This mechanism allows

140. Stephen Carter refers to this as the "problem of Petrushevsky's watch." This problem relates to a story by the Russian writer Daniil Kharms about Pushkin. "Once Petrushevsky broke his watch and sent for Pushkin. Pushkin came, looked at Petrushevsky's watch, and put it back on the chair. 'What do you say, Brother Pushkin?' Petrushevsky asked. 'The wheels stopped going round,' Pushkin said." Daniil Kharms, *Anecdotes About Pushkin's Life*, in *RUSSIA'S LOST LITERATURE OF THE ABSURD* 66, 66 (George Gibian ed., trans., 1971), quoted in Stephen L. Carter, *Custom, Adjudication, and Petrushevsky's Watch: Some Notes on the Intellectual Property Front*, 78 *V.A. L. REV.* 129 (1992).

After this narration, Carter goes on to say:

I sometimes share this story with my students in Contracts when we talk about the ability of courts to stand outside of an industry and to figure out what the custom of dealing is in order to imply terms in a contract. The courts, I explain, might be able to tell whether the wheels are turning, but I am not sure that they can tell why or why not. . . .

. . . Even courts inclined to enforce private orderings might not be very good at anthropology. The judge, after all, is on the outside, looking in. . . . [A] court is called upon to work out not only the conduct or custom of the parties with respect to each other, but the custom of dealing within the industry. Although lawsuits in which industry customs come into question are, of course, quite common, I have always wondered, during my years of teaching first-year Contracts, whether the courts really know what they are talking about — not because the judges lack competence, but because the further beyond the facts of the case they go, the weaker their sources of information are likely to be.

Carter, *supra*, at 132.

141. See Cass R. Sunstein, *Law and Administration After Chevron*, 90 *COLUM. L. REV.* 2071 (1990). Sunstein notes:

Sometimes regulation is made more difficult because of the pervasive problem of changed circumstances. New developments involving technological capacity, economics, [or] the international situation . . . may affect regulatory performance. Congress is unable to amend every statute to account for these changes, a situation that creates a genuine problem for those who must apply the statute. . . . In these circumstances, a grant of interpretive authority to administrators, allowing them to take changed circumstances into consideration, seems to be a valuable if partial corrective.

Id. at 2088-89. See also Antonin Scalia, *Judicial Deference to Administrative Interpretations of Law*, 1989 *DUKE L.J.* 511, 517-18.

142. The PTO has held public hearings on patent protection for nucleic acid sequences, medical therapeutic and diagnostic methods, biotechnology, and computer software. See Notice of Hearings and Request for Comments on Issues Relating to Patent Protection for Nucleic Acid Sequences, 61 *Fed. Reg.* 9980 (1996); Notice of Hearings and Request for Comments on Issues Relating to Patent Protection for Therapeutic and Diagnostic Method,

the PTO to familiarize itself with the nature of the technology, its language, and its culture.¹⁴³ As Wittgenstein noted, "[o]ne cannot guess how a word functions. One has to *look at* its use and learn from that."¹⁴⁴ This point cannot be overemphasized. The pharmaceutical, biotechnology, computer software, and chemical industries, to name but a few, spend billions of dollars annually on research and development. Each of these industries is unique and each employs different and constantly evolving languages and methodologies.¹⁴⁵ It is virtually impossible to

61 Fed. Reg. 10320 (1996); Notice of Public Hearings and Request for Comments on Patent Protection for Biotechnological Inventions, 59 Fed. Reg. 45267 (1994); Public Hearings and Request for Comments on Patent Protection for Software-Related Inventions, 58 Fed. Reg. 66347 (1993); see also *Patent and Trademark Office: Biotech Industry Blasts PTO at San Diego Hearing*, 48 PAT. TRADEMARK & COPYRIGHT J. (BNA) 677 (Oct. 20, 1994) (reporting that witnesses criticized PTO biotech examiners); *Patent and Trademark Office: Improved Patents for Software Urged at Second Round of Hearings*, 47 PAT. TRADEMARK & COPYRIGHT J. (BNA) 357 (Feb. 17, 1994); *Patent and Trademark Office: PTO Hears from Silicon Valley on Patent Protection for Software*, 47 PAT. TRADEMARK & COPYRIGHT J. (BNA) 307 (Feb. 3, 1994). The software hearings matured into a set of examination guidelines, see *Examination Guidelines for Computer-Related Inventions*, 61 Fed. Reg. 7478 (1996). See generally, *US Patent and Trademark Office: Public Hearings* <<http://www.uspto.gov/web/offices/com/hearings/>> (making available transcripts from recent hearings).

143. Bruce Lehman, Assistant Secretary of Commerce and Commissioner of Patents and Trademarks, states:

Under my regime, we have instituted this policy of public hearings and [on a policy basis] we can reach out to . . . the world in a way that is entirely impossible for the [Federal Circuit]. All the [Federal Circuit] can do is all that it is ethically permitted to do. That is to read the briefs and listen to oral arguments of the parties This is not remotely close to the fact, information, [and] policy gathering apparatus that we have here [at the PTO], where not only can we rely on our internal staff of literally thousands of technical people, examiners and lawyers, but also our capacity to reach out to have public hearings; to meet and talk with people in the bar, all of these various groups that deal with this office.

Interview with the Hon. Bruce Lehman, Assistant Secretary of Commerce and Commissioner of the Patent and Trademark Office, in Washington, D.C. (Nov. 2, 1994) (transcript on file with the *Harvard Journal of Law and Technology*).

144. WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, § 340.

145. Henryk Stolimowski has discerned "specific patterns of technological thinking for some branches of technology." Henryk Stolimowski, *The Structure of Thinking in Technology*, in PHILOSOPHY OF TECHNOLOGY 42, 46-48 (1983). He notes that, "[i]n general, it seems to me that *specific branches of learning originate and condition specific modes of thinking, develop and adhere to categories through which they can best express their content and by means of which they can further progress.*" *Id.* at 46. He uses microbiology as an example "to spell out some of the structures or patterns of thinking in technology." *Id.* at 46. To wit:

The microbiologist makes daily observations of microscopic sections which are quite simple from a certain point of view. Now what is a microscopic section, for example, of a diphtheria culture? It is, in the

point out a characteristic common to *all* technologies. Only the PTO is positioned to engage these industries and discern their respective technological languages in the context of the patent lexicon.

b. The PTO and Expertise

Agency expertise has long been a justification for according deference.¹⁴⁶ Expertise should also be a strong factor in deciding who should serve as the grammarian.¹⁴⁷ It is axiomatic that validity determinations are highly complex and require a great deal of technical expertise. The subject matter of a claimed invention can range from aircraft engines to pharmaceuticals to computer software, and an understanding of each technology and how it relates to the law is critical to the *meaning* of the claim language.

This is why the PTO, an institution that is constantly using the legal and technical words, and whose employees are trained in the relevant technologies,¹⁴⁸ is best suited to be the Wittgensteinian grammarian.¹⁴⁹

layman's language, a specific configuration of certain forms which possess characteristic structures. This is how far we can go in describing the phenomenon verbally. In other words, no amount of verbal explanation will render it possible for the layman and generally for the untrained person to recognize the diphtheria culture by mere description. At first, the layman and beginning students of microbiology are simply unable to perceive what is there to be seen. After some period of *training* they do perceive and are in fair agreement as to what they see. The ability to recognize certain microscopic structures is thus peculiar to students of microbiology.

Id. at 46 (emphasis added).

Stolimowski summarizes as follows:

[T]o think in terms specific for a given discipline is to think in those terms that (1) determine the lines of investigation within this discipline; (2) account for the historical development of this discipline; [and] (3) explain the recent growth of the discipline.

Id. at 48.

146. See *Chevron U.S.A. Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 865 (1984) ("In these cases, the Administrator's interpretation represents a reasonable accommodation of manifestly competing interests and is entitled to deference: the regulatory scheme is technical and complex . . ."); *Pension Benefit Guar. Corp. v. LTV Corp.*, 496 U.S. 633, 651-52 (1990) ("[A]gency expertise is one of the principal justifications behind *Chevron* deference."). For a detailed treatment of the deference issue, see generally Nard, *supra* note 30.

147. As Learned Hand stated: "To judge on our own that this or that new assemblage of old factors was, or was not, 'obvious' is to substitute our ignorance for the acquaintance with the subject of those who were familiar with it." *Reiner v. Leon*, 285 F.2d 501, 504 (2d Cir: 1960).

148. As Schwartz explains:

The PTO conducts initial and continuing training of examiners. This training is both technical and legal. Examiners are divided among

In our hypothetical, Marge claimed "a composition of matter, comprising: a) ARO1 Oxide; and b) CRO1 Oxide." The PTO examiners and Board members trained in chemistry are more likely to have an understanding of what "CRO1 Oxide" is and how it relates to statutory terms such as "obvious" than other potential interpreters. At the very least, it can be said that the examiners and Board members are "plugged in" to the chemical industry to a greater extent than Article III judges and have a better feel for the statutory language *as it pertains* to the relevant industry.¹⁵⁰

c. The PTO and Certainty

A system that excludes the PTO from the enforcement mechanism and enables courts and juries to second guess the PTO *de novo* leads to considerable uncertainty in one's property interest. The Supreme Court spoke about the importance of certainty in *Markman*:

"[T]he limits of a patent must be known for the protection of the patentee, the encouragement of the inventive genius of others and the assurance that the subject of the patent will be dedicated ultimately to the public." Otherwise, a "zone of uncertainty which enterprise and experimentation may enter only at the risk of infringement claims would discourage invention only a little less than unequivocal foreclosure of the field," and "[t]he public [would] be deprived of rights sup-

seventeen examining groups, each headed by a group director. Each examining group covers a broad area of technology and has a number of subgroups, known as art units, that have responsibility for applications whose subject matter falls into subsets of that broad area.

HERBERT F. SCHWARTZ, *PATENT LAW AND PRACTICE* 8 n.35 (1995).

149. Assistant Secretary Lehman opines:

I think [that] . . . a nonobvious determination . . . is so clearly a technical determination . . . I mean we [the PTO] have 2000 patent examiners and in an area of biotechnology, we have over 150 Ph.Ds. Now how a judge for the [Federal Circuit], even if they are a patent lawyer, can presume to know more about whether something meets that nonobviousness test . . . than a highly trained, skilled patent examiner, often times with a Ph.D., [is beyond me].

Interview with Lehman, *supra* note 143 (third ellipsis in original).

150. My appraisal of PTO expertise is not to say that the incorporation of the PTO into the validity enforcement mechanism is devoid of concerns. For example, there is always the risk of agency capture and the prospect of "reverse capture," the latter pertaining to the PTO's alleged lack of technical competence, or, at least, the private bar's perception of such. As I mentioned earlier, my proposals would require the PTO to undergo structural and qualitative modifications.

posed to belong to it, without being clearly told what it is that limits these rights.”¹⁵¹

The Federal Circuit has also noted the importance of certainty in patent law. As Judge Bryson stated in *Litton Systems, Inc. v. Honeywell, Inc.*:

Patent counselors should be able to advise their clients, with some confidence, whether to proceed with a product or process of a particular kind. The consequences of advice that turns out to be incorrect can be devastating, and the costs of uncertainty — unjustified caution or the devotion of vast resources to the sterile enterprise of litigation — can be similarly destructive.¹⁵²

Incorporating the PTO into the enforcement mechanism by giving it primary responsibility for validity determination breeds certainty and predictability in the commercial and business worlds, rather than “the sterile enterprise of litigation.”¹⁵³ Lastly, parties may be induced to settle if they know the meaning of the claims early in the enforcement process.¹⁵⁴

2. Claim Interpretation as a “Language-Game”

Throughout the last 150 years, the institutions of patent law and technology have given rise to certain language-games within the culture of the PTO and the patent system itself. Wittgenstein stressed that “to

151. *Markman v. Westview Instruments, Inc.*, 116 S. Ct. 1384, 1396 (1996) (brackets in original) (citations omitted).

152. 87 F.3d 1559, 1580 (Fed. Cir. 1996).

153. Judge S. Jay Plager comments:

I can't imagine an administrative law arrangement where you get a license, a permit, a grant of right, which people can challenge time and time again. . . . It not only surprises me, it amazes me. Why would you possibly have a system that gives you a government grant which is little more than a right to litigate? That's what it really is — a federal right to litigate. Well, when I make a great invention I don't want a federal right to litigate — I want a protected property interest in that invention.

S. Jay Plager, *An Interview with Circuit Judge S. Jay Plager*, 5 J. PROPRIETARY RTS., December 1993 at 2, 6.

154. See Part III.B.1.a.

imagine a language means to imagine a form of life,"¹⁵⁵ and that "the term 'language-game' is meant to bring into prominence the fact that the *speaking* of language is part of an activity, or of a form of life."¹⁵⁶ A "form of life" is thus a cultural or social structure in which language-games are embedded. And, if patent law and technology are "forms of life," then claim interpretation, and research and development schemes are "language-games." Thus, patent law and technology can be thought of as forms of life and claim interpretation as a language-game subsumed therein.

Professors Baker and Hacker articulate seven elements to a Wittgensteinian language-game:¹⁵⁷ (1) words, and sentences formed from them, according to combinatorial rules;¹⁵⁸ (2) instruments;¹⁵⁹ (3) context;¹⁶⁰ (4) activity of the game;¹⁶¹ (5) the use, purpose, role and function of instruments, words, and sentences;¹⁶² (6) learning games;¹⁶³ and (7) completeness.¹⁶⁴ These elements show that the enterprise of claim construction is, itself, a language-game.

155. WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, § 19. Thomas D. Eisele interprets this statement as Wittgenstein "urging us to remember that, in investigating any means of expression, any symbol system, any medium for making meaning — which for me includes the law, . . . we must see implicit in every nook and cranny of the medium or system the lives of its users and inhabitants." Eisele, *supra* note 31, at 58.

156. WITTGENSTEIN, INVESTIGATIONS, *supra* note 32, § 23.

157. BAKER & HACKER, *supra* note 43, at 96-97.

158. The vocabulary and its use in speech acts (moves in the language-game) is specified.

159. These include: (a) gestures, as used in teaching the use of "there", (b) patterns, whether samples, words, or figure drawings; and (c) pictures in a table that correlates words and pictures.

160. Baker and Hacker explain "context" as follows:

Like any other game, a language-game is "played" in a setting. Wittgenstein's stress on the context of the game appears to be motivated by the wish to bring to the fore elements of linguistic activities which, while not obviously involved in the explanation of the meaning of constituent expressions (hence unlike instruments), are nevertheless pertinent to their meaning. At its most general the notion of context encompasses the presuppositions of meaning. If the context were significantly different, the game would not be played, for it would be pointless.

BAKER & HACKER, *supra* note 43, at 96.

161. This element is related to "context." As Baker and Hacker explain, "It is in the activities constitutive of a language-game that the point and purpose of linguistic expressions is evident." BAKER & HACKER, *supra* note 43, at 96.

162. These features, which must be viewed in contrast to form and structure of expression, are of central importance to Wittgenstein's later philosophy.

163. This feature relates to the *training* that is necessary to play a language-game (e.g., memorizing words).

164. This feature is meant to emphasize that Wittgenstein's language-games are not fragments of a language, but have a sense of completeness.

In the hypothetical claim set forth in Part III.A.2, Marge claimed "a composition of matter, comprising (a) ARO1 Oxide; and (b) CRO1 Oxide." Given this, we can analyze the claim language in the context of the seven elements listed above. First, it is beyond cavil that Marge's claim is made up of words and sentences formed according to *combinatorial rules*.¹⁶⁵ Second, the construction of a claim involves the use of *instruments*. For example, when interpreting a claim, one may consider the drawings and examples (or samples and models) in the patent specification.¹⁶⁶ Third, *context* is essential to claim interpretation in that the claim must "enable any person skilled in the art to which it pertains . . . to make and use the [claimed invention]."¹⁶⁷ Thus, the discernment of the technological context (i.e., the "art") is a basic prerequisite of claim interpretation. Having ascertained the relevant art (for our purposes organic chemistry), a determination of a "person skilled in the art" is required. This determination is profoundly contextual.¹⁶⁸ Fourth, the *activity* of claim interpretation can be viewed as the technological ethos or technical culture associated with the claim language employed by the inventor.¹⁶⁹ Fifth, the *use, purpose, role, and function* of instruments, words and sentences is closely related to the "activity" of claim interpretation. Instead of focusing on the form and structure of the

165. See *supra* note 103.

166. See *SmithKline Diagnostics, Inc. v. Helena Labs. Corp.*, 859 F.2d 878, 882 (Fed. Cir. 1988) ("To ascertain the meaning of the claims, we look to the claim language, the specification, and the prosecution history.") Title 35 sets forth the contents of the specification:

The specification shall contain a written description of the invention, and 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, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

35 U.S.C. § 112 (1994). Furthermore, § 113 of the Patent Code states that "[t]he applicant shall furnish a drawing where necessary for the understanding of the subject matter sought to be patented." 35 U.S.C. § 113 (1994). The applicant may also be required to submit a "model of convenient size to exhibit advantageously the several parts of his invention." 35 U.S.C. § 114 (1994).

167. 35 U.S.C. § 112 (1994).

168. The factors for determining a person of ordinary skill in the art include: (1) the educational level of the inventor; (2) the various prior art approaches employed; (3) the types of problems encountered in the art; (4) the rapidity with which innovations are made; (5) the sophistication of the technology involved; and (6) the educational background of those actively working in the field. See *Orthopedic Equip. Co., v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1382 (Fed. Cir. 1983).

169. In the relevant art of organic chemistry, the grammarian's concentration may focus on the how the industry has used terms such as "ARO1 Oxide" and "CRO1 Oxide." An inquiry into the research and development mechanism, and how research scientists and business executives perceive patentability standards are all part of the *activity*.

claim, the grammarian is more concerned with the use and function of the words within the claim. The sixth element highlights the importance of *training*, and this gets to the heart of this Article. It is the PTO that is well trained (or at least better trained than the courts) to give meaning to patent claims and make validity determinations. Lastly, the language-game of claim interpretation is a *complete* game because it is the claim that defines the metes and bounds of the invention.¹⁷⁰ Exclusivity does not reside beyond the scope of the claim and, as stated, claim interpretation is usually dispositive with respect to validity and infringement.¹⁷¹

Viewing patent law as a language-game shows the inescapably social and linguistic nature of patent law. This underlines the need, developed throughout this Article, to understand patent law as an artifact of language tied to a particular technological community.

3. A Proposed Procedural Framework

Although an elaboration of the procedural mechanism that would accommodate my proposal is beyond the scope of this Article, it is worthwhile to introduce an overall structure.

When a patent is litigated in federal district court, the court should, after the discovery phase, transfer the validity determination to the PTO. Then, the court should review the PTO's validity determination under the "arbitrary and capricious" standard or the framework established in *Chevron*.¹⁷² The validity determination, depending upon the technology, will be made by one of the PTO's several technological committees of patent validity, comprised of lawyers trained in the relevant technological practice. The proceeding should be *inter partes* in nature. A committee member may also be assisted by a patent examiner (an in-house expert), with the responsibility of exegesis remaining with the committee member.¹⁷³

Given that many patent disputes are settled through alternative dispute resolution ("ADR"), one may also ask if the Commissioner has the authority to delegate examiners to an arbitrator who has requested assistance in a particular case. Are there persons in the PTO who could assist parties in ADR proceedings? It may be worthwhile to experiment with such an adjudicative scheme. Such an experiment may be a good way to test the waters and, perhaps, lead to legislative reform.

170. See *supra* note 21.

171. See *supra* notes 118-119 and accompanying text.

172. *Chevron, U.S.A., Inc. v. Natural Resources Defense Council*, 467 U.S. 837, 865 (1984).

173. Such a procedural mechanism would, of course, require legislation.

IV. CONCLUSION

Throughout this Article, I have attempted to explain how Wittgenstein enables us to better understand patent validity determination and claim interpretation by showing how meaning is inextricably tied with the use of the language at issue. Thus, the heart of a patent system will be whichever entity is charged with ascribing meaning to claim language. Since the PTO has the expertise accompanying an internal perspective, it is best suited (or at least better suited than courts and juries) to discern the meaning of claim language and thus should be given primary responsibility for determining patent validity. This task is accomplished by employing the modalities, especially the techno-patent dynamic. In order to maintain the legitimacy of our patent system, construction of the patent code with reference to the modalities is essential.