

COMMON KNOWLEDGE AND NON-PATENT LITERATURE IN THE INTERNET AGE

*Jorge L. Contreras*¹

May 6, 2015

Prior to 2002, U.S. patent examiners were permitted to reject claims for obviousness based on “common knowledge and common sense of a person of ordinary skill in the art without any specific hint or suggestion in a particular reference.”² But this practice was effectively abolished by the Federal Circuit in *In re Lee*, which held that any PTO determination of obviousness must be supported by a specific reference in the written record.³

The PTO has embodied this standard in the Manual of Patent Examining Procedure (MPEP), which explains that “[o]fficial notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of *instant and unquestionable demonstration* as being well-known.”⁴ Needless to say, a standard requiring that anything be established by “instant and unquestionable demonstration” is nearly insurmountable. Not surprisingly, the PTO has grown increasingly dependent on written references when making obviousness rejections. By the same token, fewer such rejections are based on common knowledge, both because searching for written references is time consuming and unrewarding for examiners, and because items of common knowledge are seldom contained in the written literature.⁵ The practical inability of examiners to rely on common

¹ Associate Professor, S.J. Quinney College of Law, University of Utah. The author thanks Arti Rai and Amelia Rinehart for feedback and Ryan Schmeer for invaluable research assistance. A prior version of this article was submitted to the U.S. Patent and Trademark Office on May 5, 2015, in response to its Request for Comments on Enhancing Patent Quality.

² *In re Lee*, 277 F.3d at 1341 (quoting Board of Patent Appeals and Interferences).

³ *Id.* at 1344. The Federal Circuit’s reasoning in *Lee* was based on its interpretation of the Supreme Court’s decision in *Dickinson v. Zurko*, which held that factual determinations made by examiners at the PTO are subject to judicial review under the Administrative Procedure Act (APA), 527 U.S. 150, 152 (1999). The Federal Circuit ruled that such PTO factual determinations must be supported by “substantial evidence”, the APA standard generally applied to formal agency rulemaking. 5 U.S.C. 500 et seq., §706(2)(E) (1994). This standard requires that all information on which the agency’s decisions are based be found within the written record of the relevant proceeding.

The Federal Circuit’s application of the “substantial evidence” standard to PTO factual determinations, rather than the APA’s more deferential “arbitrary and capricious” standard under §706(2)(A), has been criticized by several commentators. *See, e.g.*, Arti K. Rai, *Allocating Power over Fact-Finding in the Patent System*, 19 BERKELEY TECH. L.J. 907, 917 (2004); John S. Goetz, *An ‘Obvious’ Misunderstanding: Zurko, Lee and the Death of Official Notice (Part II)*, 86 J. PAT. TRADEMARK OFF. SOC’Y 183, 218 (2004).

⁴ U.S. PATENT AND TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE at §2144.03[A] (9th ed. 2014) (emphasis added) [hereinafter MPEP].

⁵ *See KSR International Co. v. Teleflex Inc.*, 550 U.S. 398 (2007) (“In many fields it may be that

knowledge as a basis for obviousness rejections diminishes the rigor of the examination process and the quality of the resulting allowed claims.

Arguably, the Supreme Court disavowed this high degree of dependence on the written record in *KSR International Co. v. Teleflex Inc.*⁶ In *KSR*, the Court overturned the Federal Circuit's prevailing test requiring that a combination of known elements would be found obvious only if the combination was supported by an explicit "teaching, suggestion or motivation" (TSM) in the prior art. In rejecting the TSM test, the Court wrote that "the obviousness analysis cannot be confined ... by overemphasis on the importance of published articles and the explicit content of issued patents."⁷ This reasoning should apply equally to the "substantial evidence" test for common knowledge created by the Federal Circuit in *Lee*. However, despite updating its procedures to reflect the holding of *KSR* with respect to combinations of prior elements,⁸ the PTO has never updated the MPEP to reinstate the common knowledge test post-*KSR*. Doing so would improve the patent examination process significantly.

By a substantial majority, the principal references utilized by examiners as prior art are U.S. patents.⁹ Numerous commentators have identified problems that can arise from this emphasis on patent literature.¹⁰ Most notably, patent literature is not likely to contain a complete description of technologies in new and emerging markets or markets that have not traditionally been characterized by heavy patenting activity (e.g., software and business methods). My own research shows that patent literature offers poor coverage of commonplace and household items, yielding examiner rejections in these fields that are inapt and easily overcome.¹¹

To address these concerns, examiners have long been permitted to utilize non-patent literature (NPL) in the examination process.¹² The PTO's Scientific and Technical Information Center (STIC) maintains an extensive library of technical books, manuals, periodicals, reports and other materials of potential use to

there is little discussion of obvious techniques or combinations"); Rai, *supra* note 3, at 913 ("Because skilled scientists and engineers have little motivation to publish what is already well known, this requirement may make the examiner's task virtually impossible").

⁶ 550 U.S. 398 (2007).

⁷ *Id.*

⁸ U.S. Patent and Trademark Office, Examination Guidelines for Determining Obviousness, 72 FED. REG. 57,526-29 (Oct. 10, 2007).

⁹ Christopher A. Cotropia, Mark A. Lemley & Bhaven Sampat, *Do Applicant Patent Citations Matter?*, 42 RESEARCH POLICY 844, 847 (2013); Julie Callaert et al., *Traces of Prior Art: An Analysis of Non-Patent References Found in Patent Documents*, 69 SCIENTOMETRICS 3 (2006); John R. Allison & Mark A. Lemley, *Who's Patenting What? An Empirical Exploration of Patent Prosecution*, 53 VAND. L. REV. 2099, 2131 (2000); Robert P. Merges, *As Many as Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform*, 14 BERKELEY TECH. L. REV. 577, 589 (1999).

¹⁰ See sources cited in note 9, *supra*.

¹¹ Jorge L. Contreras, *Silly Patents, Common Knowledge and the Elusive Prior Art of Everyday Life* (draft on file with author).

¹² See MPEP, *supra* note 4, at §901.06 (Nonpatent publications).

examiners.¹³ Examiners also have access to hundreds of internal and external electronic databases containing scientific journals, newspapers and other NPL.¹⁴ Nevertheless, NPL is referenced far less frequently than patent literature in examinations, and the majority of NPL that is referenced constitutes scientific journal articles and other technical documentation.¹⁵

Several explanations have been offered regarding the low frequency with which NPL is used in examination, including the greater ease, convenience and familiarity of patent databases, relative inaccessibility of NPL sources to examiners (particularly examiners who work remotely), and lack of incentives for examiners to survey an entire field of prior art thoroughly.¹⁶ But today, when Google and other readily available search engines are part of the fabric of everyday life, examiners have no excuse for limiting their prior art inquiries to U.S. patents and scientific journals. The PTO's antiquated procedures for identifying and citing NPL should be overhauled to encourage online searching for prior art via *all* available means, including consumer search engines.¹⁷

Based on the foregoing, I recommend that the PTO amend the MPEP:

1. to restore examiners' ability to rely on common knowledge and official notice when making obviousness determinations, as supported by the Supreme Court's precedent in *KSR*; and
2. to encourage examiners to search relevant technical fields using not only databases of U.S. patents and scientific journals, but the entire Worldwide Web.

It is hoped that these modest suggestions will improve patent quality by increasing the scope of prior art available to examiners to reject non-meritorious patent claims.

¹³ *Id.* at §901.06(a).

¹⁴ *See, e.g.*, Notice of Public Hearing and Request for Comments on Issues Related to the Identification of Prior Art During the Examination of a Patent Application, 64 Fed. Reg. 28,803, 28,804 (May 27, 1999).

¹⁵ Callaert et al., *supra* note 9, at Tables 5a and 5b.

¹⁶ *See, e.g.*, Cotropia, Lemley & Sampat, *supra* note 9, at 847-48.

¹⁷ The PTO has recently taken positive steps toward the enhancement of its NPL databases by, for example, requesting that private firms contribute internal technical documentation and other materials to its prior art databases. *See* Jorge L. Contreras, *Industry Responds to White House Calls for Prior Art, Examiner Training*, PatentlyO, Feb. 27, 2014, <http://patentlyo.com/patent/2014/02/industry-examiner-training.html>.