
NOTE

Leapfrog Enterprises v. Fisher-Price: Secondary Considerations in Nonobviousness Determinations

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TABLE OF CONTENTS

INTRODUCTION	599
I. BACKGROUND	603
A. <i>The Patent Act of 1952</i>	604
B. <i>The Graham Inquiry and the TSM Test</i>	607
C. <i>Secondary Considerations</i>	611
D. <i>KSR International Co. v. Teleflex Inc.</i>	616
II. <i>LEAPFROG ENTERPRISES, INC. v. FISHER-PRICE, INC.</i>	618
III. ANALYSIS	619
A. <i>Leapfrog Did Not Adequately Weigh Secondary Considerations Under Graham</i>	620
B. <i>Leapfrog Misinterpreted the Supreme Court’s Holding in KSR</i>	625
C. <i>Leapfrog Leads to Unpredictability in the Patent System</i> ...	627
CONCLUSION.....	629

INTRODUCTION

Martha, an inventor working in Acme Corporation’s (“Acme”) research and development laboratory, develops a new toy designed to

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help children pronounce words.¹ Martha and Acme decide to pursue a patent on the toy.² For the United States Patent and Trademark Office (“USPTO”) to issue the patent, Martha’s invention must satisfy three major substantive requirements.³ First, Martha’s invention must be novel.⁴ Next, Martha’s invention must have utility.⁵ Finally, Martha’s invention must be nonobvious.⁶ The USPTO will reject Martha’s application if it can show her invention fails to satisfy one of the three requirements.⁷ If Martha’s patent application complies with all relevant requirements, the USPTO will issue Martha a patent based on the “claims” defining the scope of the invention.⁸

Martha receives her patent and assigns it to Acme.⁹ Rival company Toy Corporation begins producing a toy similar to Martha’s invention.¹⁰ Asserting its patent rights, Acme sues Toy Corporation

¹ This hypothetical is loosely based on the facts of *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1158-59 (Fed. Cir. 2007). See *infra* Part II for a discussion of *Leapfrog*. This hypothetical illustrates the patent process and some of the requirements inventors must satisfy to receive a patent. See 35 U.S.C. §§ 102-03, 112 (2000). See generally ROBERT PATRICK MERGES & JOHN FITZGERALD DUFFY, PATENT LAW AND POLICY: CASES AND MATERIALS 49-53 (4th ed. 2007) (providing overview of patent application process).

² See *supra* note 1.

³ See *infra* notes 49-58 and accompanying text (discussing novelty, utility, and nonobviousness).

⁴ See 35 U.S.C. § 102; *In re Robertson*, 169 F.3d 743, 746 (Fed. Cir. 1999) (rejecting claim on diaper fastening and disposal systems for lack of novelty); *Lewmar Marine, Inc. v. Bariant, Inc.*, 827 F.2d 744, 748 (Fed. Cir. 1987) (discussing unpatentability of inventions lacking novelty); MERGES & DUFFY, *supra* note 1, at 357.

⁵ 35 U.S.C. § 101 (2000). The Federal Circuit and United States Patent and Trademark Office interpret utility to mean a specific, real-world use. U.S. PATENT & TRADEMARK OFFICE, REVISED INTERIM UTILITY GUIDELINES TRAINING MATERIALS 5-6 (1999), available at <http://www.uspto.gov/web/offices/pac/utility/utilityguide.pdf>; see *Brenner v. Manson*, 383 U.S. 519, 534-35 (1966); *In re Ziegler*, 992 F.2d 1197, 1203 (Fed. Cir. 1993) (affirming denial of patent for failing to disclose practical utility).

⁶ See 35 U.S.C. § 103; *KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1729-30 (2007); *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966).

⁷ Nonobviousness is not satisfied if the USPTO can show the invention was an obvious improvement or a mere combination of prior technology. See 35 U.S.C. § 103; *In re Thrift*, 298 F.3d 1357, 1363 (Fed. Cir. 2002); U.S. PATENT & TRADEMARK OFFICE, MANUAL OF PATENT EXAMINING PROCEDURE § 706.02(j) (8th ed. 2001, rev. 2005).

⁸ See 35 U.S.C. § 112 (2000); *Zenith Labs., Inc. v. Bristol-Myers Squibb Co.*, 19 F.3d 1418, 1424 (Fed. Cir. 1994) (stating claims define “the metes and bounds of the invention”); HERBERT F. SCHWARTZ, PATENT LAW AND PRACTICE § 5.1, at 112-13 (4th ed. 2003).

⁹ 35 U.S.C. § 261 (2000).

¹⁰ Even if Toy Corporation’s invention is not identical to Martha’s, Acme can still sue for infringement under the doctrine of equivalents. See *Warner-Jenkinson Co. v.*

for infringement.¹¹ Toy Corporation argues the USPTO improperly granted Acme's patent because Martha's invention did not satisfy the requirement of "nonobviousness."¹² The court re-evaluates the patent and agrees with Toy Corporation, finding Martha's invention obvious.¹³ Acme not only loses the suit, but also loses the patent.¹⁴

The United States patent system rewards inventors for innovation and the advancement of knowledge.¹⁵ In exchange for early and full public disclosure of the invention, the patentee receives an exclusive right to make, use, sell, or import the patented invention for a limited term.¹⁶ Once the USPTO issues a patent, the patentee may sue another party for infringing these patent rights.¹⁷ Courts will generally uphold a patent's validity unless a potential infringer can prove the USPTO erred in granting the patent.¹⁸

Hilton Davis Chem. Co., 520 U.S. 17, 40 (1997); Graver Tank & Mfg. Co. v. Linde Air Prods. Co., 339 U.S. 605, 608 (1950); U.S. PATENT & TRADEMARK OFFICE, *supra* note 7, § 2186.

¹¹ See 35 U.S.C. § 271 (2000).

¹² See *id.* § 103.

¹³ See generally MERGES & DUFFY, *supra* note 1, ch. 8 (discussing patent infringement).

¹⁴ See *id.* Challenging patent invalidity is fair to infringers and benefits society by weeding out invalid patents. See Cardinal Chem. Co. v. Morton Int'l, Inc., 508 U.S. 83, 100 (1993); Sinclair & Carroll Co. v. Interchem. Corp., 325 U.S. 327, 330 (1945).

¹⁵ See U.S. CONST. art. I, § 8, cl. 8; Graham v. John Deere Co., 383 U.S. 1, 6 (1966); MERGES & DUFFY, *supra* note 1, at 4-8.

¹⁶ 35 U.S.C. § 271(a) (2000); see United States v. Dubilier Condenser Corp., 289 U.S. 178, 186-87 (1933); Grant v. Raymond, 31 U.S. (6 Pet.) 218, 241-42 (1832). Courts and commentators often referred to patent rights as "monopolies." See, e.g., E. Bement & Sons v. Nat'l Harrow Co., 186 U.S. 70, 91 (1902) (stating object of United States patent law is to grant monopolies); Comment, *The Relation of Patents and Anti-Trust Law*, 38 YALE L.J. 246, 246 (1928) (discussing patents as federally sanctioned monopolies). But see *Dubilier*, 289 U.S. at 186 (stating term "monopolies" does not accurately describe patents); Seymour v. Osborne, 78 U.S. (11 Wall.) 516, 533 (1870) (same); MERGES & DUFFY, *supra* note 1, at 49-50 (arguing commentators should not refer to patents as monopolies because non-infringing substitutes may be available). See generally Giles S. Rich, *The Relation Between Patent Practices and the Anti-Monopoly Laws*, 14 FED. CIR. B.J. 5 (2004) (examining relationship of patent practice to anti-monopoly laws).

¹⁷ 35 U.S.C. § 271, *invalidated by* Fla. Prepaid Postsecondary Educ. Expense Bd. v. Coll. Sav. Bank, 527 U.S. 627 (1999); see *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (2007); *Sakraida v. Ag Pro, Inc.*, 425 U.S. 273, 273-74 (1976). A potential infringer may also seek a declaratory judgment against the patentee to invalidate the patent. 28 U.S.C. § 2201 (2000).

¹⁸ 35 U.S.C. § 282 (2000) (stating issued patents enjoy presumption of validity); see *Cardinal*, 508 U.S. at 100; *Sinclair*, 325 U.S. at 330.

In *KSR International Co. v. Teleflex Inc.*, the United States Supreme Court adopted a framework for determining a patent's validity.¹⁹ The Court rejected the rigid approach applied in the past by the United States Court of Appeals for the Federal Circuit.²⁰ The Court established a more flexible, common sense approach, giving courts more leeway to invalidate patents.²¹ The Supreme Court recognized that evidence of secondary considerations is relevant, but not dispositive, to determining patent validity.²²

In *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc.*, the Federal Circuit attempted to employ the Supreme Court's flexible analysis.²³ In holding the claimed invention obvious, the *Leapfrog* court applied a common sense approach, stating courts are not bound by rigid formulas in evaluating nonobviousness.²⁴ The court extended *KSR* by finding obviousness despite a substantial evidentiary showing of nonobviousness.²⁵

This Note argues that the Supreme Court should overturn *Leapfrog's* holding and evaluate relevant secondary considerations such as commercial success adequately when determining nonobviousness.²⁶ Part I provides an overview of statutory and case law governing patents and describes the requirements for patentability.²⁷ It discusses the applicable tests for evaluating nonobviousness and the role of secondary considerations in nonobviousness analyses.²⁸ Part II

¹⁹ See *KSR*, 127 S. Ct. at 1742.

²⁰ *Id.* at 1739. To invalidate a patent as obvious, the Federal Circuit required a "teaching, suggestion, or motivation" to combine prior known elements. *Id.* at 1741; see discussion *infra* Part I.B. The *KSR* Court explained that while this test captured a helpful insight, courts should not apply it as a "rigid and mandatory formula." *KSR*, 127 S. Ct. at 1741.

²¹ See *KSR*, 127 S. Ct. at 1732, 1739-41; see also *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1260 (Fed. Cir. 2007); *Omegaflex, Inc. v. Parker-Hannifin Corp.*, 243 F. App'x 592, 596 (Fed. Cir. 2007); *Andersen Corp. v. Pella Corp.*, 500 F. Supp. 2d 1192, 1196 (D. Minn. 2007).

²² *KSR*, 127 S. Ct. at 1745. Secondary considerations are objective indicia of nonobviousness extrinsic to the invention. See discussion *infra* Part I.C. Courts use secondary considerations to assist them in evaluating nonobviousness. *Id.*

²³ *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007).

²⁴ *Id.* at 1161-63.

²⁵ *Id.* at 1162.

²⁶ *Id.* at 1163; see discussion *infra* Part I.C (discussing secondary considerations).

²⁷ See discussion *infra* Part I.A (detailing statutory background in obviousness determinations).

²⁸ See discussion *infra* Part I.B-D (describing *Graham* inquiry, TSM test, and cases dealing with secondary considerations).

discusses the facts, procedure, holding, and rationale of *Leapfrog*.²⁹ Part III argues the *Leapfrog* court erred in invalidating Leapfrog's patent.³⁰ First, the *Leapfrog* court failed to evaluate secondary considerations adequately in the context of nonobviousness in line with *KSR* and *Graham*.³¹ Second, the *Leapfrog* court misinterpreted the Supreme Court's holding in *KSR* by raising the nonobviousness standard beyond the level contemplated by the Supreme Court.³² Finally, Part III concludes that allowing courts to disregard secondary considerations would engender unpredictability and abuse, thereby discouraging the legitimate exercise of patent rights.³³

I. BACKGROUND

Obtaining patents is the mechanism by which inventors secure limited terms of exclusive right to their inventions.³⁴ To obtain a patent, an inventor must file a timely application with the USPTO and sufficiently describe the invention in the application.³⁵ The applicant must also meet three fundamental patentability requirements: novelty, utility, and nonobviousness.³⁶ Novelty and utility are relatively easy hurdles to clear because the USPTO broadly construes novelty and requires only minimal utility.³⁷ The nonobviousness

²⁹ See discussion *infra* Part II (analyzing recent Federal Circuit case dealing with nonobviousness).

³⁰ See discussion *infra* Part III.

³¹ See discussion *infra* Part III.A (stating reasons why courts should give secondary considerations substantial weight).

³² See discussion *infra* Part III.B (stating reasons why Court did not raise nonobviousness standard in *KSR*).

³³ See discussion *infra* Part III.C (discussing reasons why disregarding secondary considerations increases uncertainty in patent system).

³⁴ See 35 U.S.C. §§ 102-03, 271 (2000); *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150-51 (1989); *Graham v. John Deere Co.*, 383 U.S. 1, 14 (1966). See generally MERGES & DUFFY, *supra* note 1, at 49-50 (providing overview of patent system). Other requirements for obtaining a patent are satisfying disclosure, enablement, and patentable subject matter standards. 35 U.S.C. §§ 100-01 (2000) (covering patentable subject matter); *id.* § 112 (2000) (requiring adequate disclosure for issued patents).

³⁵ 35 U.S.C. §§ 102(b), 112.

³⁶ *Id.* §§ 101, 103; see *infra* notes 49-58 and accompanying text.

³⁷ See *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 715 (Fed. Cir. 1984) (holding single prior art reference must disclose identical invention to defeat novelty); *Standard Oil Co. v. Montedison, S.p.A.*, 494 F. Supp. 370, 381 (D. Del. 1980) (stating inventor satisfies utility requirement when inventor learns enough about product to justify conclusion that it is useful for specific purpose); MERGES & DUFFY, *supra* note 1, at 207, 361, 611-12.

requirement, however, involves a difficult assessment of technical merit and thus serves a primary role in determining patentability.³⁸

A. *The Patent Act of 1952*

Prior to 1952, federal statutes grounded patent eligibility on novelty, usefulness, and whether an invention was “sufficiently . . . important” to merit exclusive rights.³⁹ Courts provided little, if any, guidance as to whether this “importance” requirement encompassed technical importance.⁴⁰ Although this requirement resurfaced in later statutes, courts started relying more heavily on assessing the abstract requirement of “invention,” along with novelty and usefulness.⁴¹ They began requiring patentable inventions to embody more ingenuity and skill than a person proficient in the relevant field could manifest.⁴² In time, courts moved towards a more rigorous interpretation of this standard.⁴³ These interpretations, which commentators criticized as

³⁸ See MERGES & DUFFY, *supra* note 1, at 611-12. Courts have developed various tests to deal with quantifying nonobviousness. See *Graham*, 383 U.S. at 17-18 (creating factual inquiry to determine nonobviousness under federal statute); *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 267 (1851) (requiring ingenuity or invention to sustain patent validity); *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577 (Fed. Cir. 1984) (requiring suggestion or incentive to combine prior art references to prove obviousness). See generally MERGES & DUFFY, *supra* note 1, ch. 7 (discussing evolution of nonobviousness standard); Robert P. Merges, *Commercial Success and Patent Standards: Economic Perspectives on Innovation*, 76 CAL. L. REV. 803, 812 (1988) (discussing gate-keeping role of nonobviousness requirement in filtering unpatentable inventions).

³⁹ Patent Act of 1836, ch. 357, § 7, 5 Stat. 117, 119-20 (1836) (repealed 1861); Patent Act of 1790, ch. 7, § 1, 1 Stat. 109, 110 (1790) (repealed 1793).

⁴⁰ See *United States v. Am. Bell Tel. Co.*, 167 U.S. 224, 247 (1897); *Reckendorfer v. Faber*, 92 U.S. 347, 351 (1875); MERGES & DUFFY, *supra* note 1, at 616; John F. Duffy, *Inventing Invention: A Case Study of Legal Innovation*, 86 TEX. L. REV. 1, 34 (2007); P. J. Federico, *Commentary on the New Patent Act*, 75 J. PAT. & TRADEMARK OFF. SOC'Y 161, 197 (1993).

⁴¹ See § 7, 5 Stat. at 119-20; see, e.g., *Cuno Eng'g Corp. v. Automatic Devices Corp.*, 314 U.S. 84, 90-91 (1941) (holding patentable invention must reveal flash of creative genius); *Reckendorfer*, 92 U.S. at 356-57 (requiring inventive genius over pure mechanical skill); *Hotchkiss*, 52 U.S. at 267 (denying patent for destitution of ingenuity or invention). See generally MERGES & DUFFY, *supra* note 1, at 616-30 (discussing evolution of “invention” standard).

⁴² See *Dunbar v. Myers*, 94 U.S. 187, 197 (1876); *Hicks v. Kelsey*, 85 U.S. (18 Wall.) 670, 673 (1873); *Hotchkiss*, 52 U.S. at 267.

⁴³ See, e.g., *Cuno*, 314 U.S. at 91 (requiring flash of creative genius for patentable inventions); *Reckendorfer*, 92 U.S. at 356-57 (requiring inventive genius over pure mechanical skill). See generally MERGES & DUFFY, *supra* note 1, at 626-30 (discussing evolution of invention requirement).

too stringent and elusive, in part prompted Congress to enact the Patent Act of 1952 (the “Act”).⁴⁴

The Act clarified the invention standard and codified prior common law standards into a patentability requirement known as nonobviousness.⁴⁵ Commentators had argued that patent law should reward inventors regardless of whether their solutions resulted from genius or ordinary skill.⁴⁶ Congress passed the Act to address concerns that heightened patentability standards would destroy the patent system.⁴⁷ In passing the Act, Congress also articulated the modern standards for novelty, utility, and nonobviousness.⁴⁸

To receive patent protection, an invention must be novel.⁴⁹ This requirement ensures society receives appreciable benefit from the invention’s disclosure in exchange for giving up the exclusive rights granted by a patent.⁵⁰ In practice, novelty is relatively easy to establish because even small variations on past inventions satisfy this requirement.⁵¹

⁴⁴ See *Great Atl. & Pac. Tea Co. v. Supermkt. Equip. Corp.*, 340 U.S. 147, 151 (1950) (acknowledging confusion and inherent elusiveness in invention test); *Jungersen v. Ostby & Barton Co.*, 335 U.S. 560, 572 (1949) (Jackson, J., dissenting) (criticizing invention standard and stating Court has invalidated virtually all patents reviewed); *Harries v. Air King Prods. Co.*, 183 F.2d 158, 162 (2d Cir. 1950) (criticizing invention standard for being most vague and ambiguous standard in existence).

⁴⁵ Patent Act of 1952, Pub. L. No. 593, 66 Stat. 792, 798 (codified as amended at 35 U.S.C. § 103 (2000)); see *Graham v. John Deere Co.*, 383 U.S. 1, 16 (1966); Christopher A. Cotropia, *Nonobviousness and the Federal Circuit: An Empirical Analysis of Recent Case Law*, 82 NOTRE DAME L. REV. 911, 916 (2007).

⁴⁶ See MERGES & DUFFY, *supra* note 1, at 628 (discussing policy-makers’ concern over invention standard); Otto Raymond Barnett, *The “Flash of Genius” Fallacy*, 25 J. PAT. OFF. SOC’Y 785, 787 (1943) (criticizing flash of genius test); cf. Robert P. Merges, *Uncertainty and the Standard of Patentability*, 7 HIGH TECH. L.J. 1, 38 (1992) (arguing patents should cover serendipitous inventions).

⁴⁷ See *Hearings on H.R. 5988, H.R. 4061, and H.R. 5248 Before the Subcomm. on Patents, Trademarks, and Copyrights of the Comm. on the Judiciary H.R.*, 80th Cong. 56 (1948) (statement of Giles Rich, practitioner); MERGES & DUFFY, *supra* note 1, at 628-30; William D. Sellers, *The Flash of Genius Doctrine Approaches the Patent Office*, 26 J. PAT. OFF. SOC’Y 275, 280 (1944). The Act was partly a reaction to the Supreme Court’s flash of creative genius test. See *Cuno*, 314 U.S. at 91.

⁴⁸ 35 U.S.C. §§ 101-03, 112 (2000).

⁴⁹ See *id.* § 102; *In re Robertson*, 169 F.3d 743, 746 (Fed. Cir. 1999) (rejecting claim on diaper fastening and disposal systems for lack of novelty); *Lewmar Marine, Inc. v. Bariant, Inc.*, 827 F.2d 744, 748 (Fed. Cir. 1987) (discussing unpatentability of inventions lacking novelty); MERGES & DUFFY, *supra* note 1, at 357 (discussing novelty requirement).

⁵⁰ 1 WILLIAM ROBINSON, *THE LAW OF PATENTS FOR USEFUL INVENTIONS* § 22 (1890).

⁵¹ See *Structural Rubber Prods. Co. v. Park Rubber Co.*, 749 F.2d 707, 715 (Fed. Cir.

A patentable invention must also perform a useful function.⁵² In the past, courts read this utility requirement narrowly, denying patents on inventions they deemed harmful to society.⁵³ The modern utility standard is broader; inventions satisfy the requirement if they actually accomplish their intended purpose and have some practical public use.⁵⁴

Finally, an invention must satisfy the modern standard of nonobviousness.⁵⁵ This requirement measures technical and intellectual achievement in relation to the “prior art.”⁵⁶ The term “prior art” describes the total body of public knowledge relating to the

1984) (holding single prior art reference must disclose identical invention to defeat novelty); *see also* Schering Corp. v. Geneva Pharm., 339 F.3d 1373, 1377 (Fed. Cir. 2003); Radio Steel & Mfg. Co. v. MTD Prods., Inc., 731 F.2d 840, 845 (Fed. Cir. 1984); RCA Corp. v. Applied Digital Data Sys., Inc., 730 F.2d 1440, 1444 (Fed. Cir. 1984); Connell v. Sears, Roebuck & Co., 722 F.2d 1542, 1548 (Fed. Cir. 1983); Kalman v. Kimberly-Clark Corp., 713 F.2d 760, 772 (Fed. Cir. 1983); SSIH Equip., S.A. v. U.S. Int’l Trade Comm’n., 718 F.2d 365, 377 (Fed. Cir. 1983). *See generally* MERGES & DUFFY, *supra* note 1, at 360-61 (discussing anticipation standard in novelty analysis).

⁵² 35 U.S.C. §§ 101, 112. *See generally* MERGES & DUFFY, *supra* note 1, ch. 3 (discussing utility requirement).

⁵³ *See, e.g.,* Lowell v. Lewis, 15 F. Cas. 1018, 1019 (C.C. Mass. 1817) (requiring beneficial use to warrant patent), *abrogated by* *In re Fisher*, 421 F.3d 1365 (Fed. Cir. 2005). *But see* Juicy Whip, Inc. v. Orange Bang, Inc., 185 F.3d 1364, 1367-68 (Fed. Cir. 1999) (allowing patent on invention useful only as deceptive display to attract customers). *See generally* MERGES & DUFFY, *supra* note 1, at 212-21 (discussing beneficial utility); Cynthia M. Ho, *Splicing Morality and Patent Law: Issues Arising From Mixing Mice and Men*, 2 WASH. U. J.L. & POL’Y 247, 283 (2000) (stating patent examiners do not currently have technical capacity to evaluate morality).

⁵⁴ *See* Estee Lauder, Inc. v. L’Oreal, S.A., 129 F.3d 588, 593 (Fed. Cir. 1997) (stating utility requirement is satisfied when inventor can justify usefulness for specific purpose); Burroughs Wellcome Co. v. Barr Labs., Inc., 40 F.3d 1223, 1228 (Fed. Cir. 1994) (stating reduction to practice requires discovery that invention actually work); Standard Oil Co. v. Montedison, S.p.A. 494 F. Supp. 370, 381 (D. Del. 1980) (stating inventor satisfies utility requirement when inventor learns enough about product to justify conclusion that it is useful for specific purpose); Teresa M. Summers, *The Scope of Utility in the Twenty-First Century: New Guidance for Gene-Related Patents*, 91 GEO. L.J. 475, 479 (2003). *See generally* MERGES & DUFFY, *supra* note 1, at 207-56 (discussing utility doctrine and its evolution). Courts will deny patents, however, on inventions that become useful only after further research. *See* Brenner v. Manson, 383 U.S. 519, 535-36 (1966); *Fisher*, 421 F.3d at 1373 (affirming denial of patent covering tags for identifying nucleic acid sequences in genes because tags had no known functions other than as research intermediaries); *see also* Nelson v. Bowler, 626 F.2d 853, 856 (C.C.P.A. 1980) (stating utility requires immediate benefit to public); U.S. PATENT & TRADEMARK OFFICE, *supra* note 7, § 2107.01.

⁵⁵ *See* 35 U.S.C. § 103 (2000); KSR Int’l Co. v. Teleflex Inc., 127 S. Ct. 1727, 1729-30 (2007); Graham v. John Deere Co., 383 U.S. 1, 17-18 (1966).

⁵⁶ MERGES & DUFFY, *supra* note 1, at 612.

invention, including prior patents and printed publications.⁵⁷ An invention is nonobvious only if it advances some significant development over the prior art.⁵⁸

Section 103 of the Act renders patent claims invalid when their differences from the prior art would have been obvious at the time of invention.⁵⁹ In articulating a modern standard for nonobviousness, Section 103 appeared to transform the abstract invention test into something more concrete.⁶⁰ Section 103's practical impact, however, remained unclear until the Supreme Court decided *Graham v. John Deere*.⁶¹

B. *The Graham Inquiry and the TSM Test*

In *Graham*, the Supreme Court established a framework for analyzing nonobviousness.⁶² The case involved a patent infringement claim on an invention designed to absorb shock from agricultural plow components.⁶³ The Court invalidated the patent as an obvious combination of known mechanical elements taught by the prior art.⁶⁴ The Court noted that in codifying the invention requirement Congress sought to clarify judicial precedent and promote uniformity in applying the nonobviousness standard.⁶⁵

⁵⁷ 35 U.S.C. § 102 (2000); U.S. PATENT & TRADEMARK OFFICE, *supra* note 7, § 2100.

⁵⁸ See 35 U.S.C. § 103(a); *Graham*, 383 U.S. at 14; R. Polk Wagner & Katherine J. Strandburg, *Debate: The Obviousness Requirement in Patent Law*, 155 U. PA. L. REV. 96, 97 (2006), available at <http://www.pennumbra.com/debates/debate.php?did=2>.

⁵⁹ 35 U.S.C. § 103(a). Courts assess nonobviousness relative to a fictional person ordinarily skilled in the art. See 35 U.S.C. § 103(a); *KSR*, 127 S. Ct. at 1731; *Graham*, 383 U.S. at 17.

⁶⁰ See 35 U.S.C. § 103(a). See generally *Graham*, 383 U.S. at 13-14 (interpreting § 103); MERGES & DUFFY, *supra* note 1, at 630-31 (discussing § 103).

⁶¹ See *Graham*, 383 U.S. at 17-18; *R.M. Palmer Co. v. Luden's, Inc.*, 236 F.2d 496, 499 (3d Cir. 1956); *Lyon v. Bausch & Lomb Optical Co.*, 224 F.2d 530, 535 (2d Cir. 1955); MERGES & DUFFY, *supra* note 1, at 630.

⁶² *Graham*, 383 U.S. at 17-18. The *Graham* inquiry governs modern nonobviousness analysis under 35 U.S.C. § 103. See *KSR*, 127 S. Ct. at 1729-30; see also *Dann v. Johnston*, 425 U.S. 219, 226 (1976); *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006); *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1289-90 (Fed. Cir. 2006); *In re Kahn*, 441 F.3d 977, 985 (Fed. Cir. 2006); *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1355 (Fed. Cir. 1999); *In re Lockwood*, 50 F.3d 966, 971 n.4 (Fed. Cir. 1995); *Lemelson v. Topper Corp.*, 450 F.2d 845, 847 (2d Cir. 1971).

⁶³ *Graham*, 383 U.S. at 4.

⁶⁴ *Id.* at 22-26.

⁶⁵ *Id.* at 16-17. The court noted that in codifying the invention requirement, Congress did not intend to alter the general level of patentability. *Id.* at 19.

The Court set forth a three-part factual inquiry to govern modern nonobviousness analysis.⁶⁶ First, courts must determine the scope and content of the prior art.⁶⁷ Next, courts must assess the differences between the prior art and the claimed invention.⁶⁸ Finally, courts must resolve the level of ordinary skill in the relevant art.⁶⁹ If someone of such skill would have found the differences between the prior art and the invention obvious, the patent is invalid under § 103.⁷⁰ The *Graham* Court also suggested evaluating certain non-prior art indicia of nonobviousness known as secondary considerations.⁷¹ These include the invention's commercial success, any long-felt need for the invention, and others' failure in attempting to solve the problem addressed by the invention.⁷²

Courts and commentators have noted judges usually do not possess technical training and cannot rely on highly partial expert witnesses in evaluating nonobviousness.⁷³ Secondary considerations, focusing on contemporaneous economic and motivational concerns, are generally easier to apply than the highly technical facts normally seen in patent cases.⁷⁴ They help judges evaluate nonobviousness in a less technical manner.⁷⁵ The *Graham* Court, however, provided little guidance regarding the weight secondary considerations held relative to its three-part primary inquiry into prior art.⁷⁶ Although *Graham* articulated a framework for determining nonobviousness, it left ambiguity in the analysis.⁷⁷ Thus, even after applying the *Graham*

⁶⁶ *Id.* at 17; see *KSR*, 127 S. Ct. at 1729-30; *Merges*, *supra* note 38, at 815.

⁶⁷ *Graham*, 383 U.S. at 17.

⁶⁸ *Id.*

⁶⁹ *Id.*

⁷⁰ 35 U.S.C. § 103(a) (2000); see *Graham*, 383 U.S. at 17.

⁷¹ *Graham*, 383 U.S. at 17-18.

⁷² *Id.*; see also *Reiner v. I. Leon Co.*, 285 F.2d 501, 504 (2d Cir. 1960).

⁷³ See *Reiner*, 285 F.2d at 503-04; *Safety Car Heating & Lighting Co. v. Gen. Elec. Co.*, 155 F.2d 937, 939 (2d Cir. 1946); Richard L. Robbins, *Subtests of "Nonobviousness": A Nontechnical Approach to Patent Validity*, 112 U. PA. L. REV. 1169, 1170 (1964).

⁷⁴ See *Graham*, 383 U.S. at 35-36; *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1555 (Fed. Cir. 1983); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1539 (Fed. Cir. 1983); Robbins, *supra* note 73, at 1172.

⁷⁵ See *Gore*, 721 F.2d at 1540; *Reiner*, 285 F.2d at 503-04; Robbins, *supra* note 73, at 1172.

⁷⁶ In *Graham's* companion cases, the court held that secondary considerations "failed to 'tip the scales of patentability.'" *Graham*, 383 U.S. at 36. The patent at issue, however, was clearly invalid based on the primary inquiry alone. *Id.* at 32-35; see also Dorothy Whelan, *A Critique of the Use of Secondary Considerations in Applying the Section 103 Nonobviousness Test for Patentability*, 28 B.C. L. REV. 357, 363-64 (1987).

⁷⁷ *Graham*, 383 U.S. at 17-18; see *Merges & Duffy*, *supra* note 1, at 663; Edward

inquiry courts face difficulty in making final determinations of nonobviousness.⁷⁸

The Federal Circuit articulated the Teaching, Suggestion, or Motivation (“TSM”) test in the mid-1980s to aid courts in their nonobviousness analyses.⁷⁹ The court created the TSM test to evaluate nonobviousness determinations based on combinations of prior art references.⁸⁰ The court also used the test to prevent bias inherent in hindsight-based nonobviousness evaluations.⁸¹

Hindsight bias occurs because almost every invention combined from existing elements seems obvious after the fact.⁸² For example, it

D. Manzo, *A Foreword To: A Panel Discussion on Obviousness in Patent Litigation*: KSR International v. Teleflex, 6 J. MARSHALL REV. INTELL. PROP. L. 590, 591-92 (2007).

⁷⁸ See *Graham*, 383 U.S. at 18 (recognizing nonobviousness question will not produce uniformity of thought in every given factual context); *Stratoflex*, 713 F.2d at 1537 (criticizing *Graham* for focusing on differences between patent and prior art and stating such differences should only aid final determination of nonobviousness); MERGES & DUFFY, *supra* note 1, at 663 (stating nonobviousness may necessarily require common sense approach that courts cannot reduce to verbal formula).

⁷⁹ See *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 297 (Fed. Cir. 1985); *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577 (Fed. Cir. 1984); see also MERGES & DUFFY, *supra* note 1, at 664; Steven J. Lee & Jeffrey M. Butler, *Teaching, Suggestion, & Motivation: KSR v. Teleflex and the Chemical Arts*, 17 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 915, 916 (2007).

⁸⁰ See *ACS*, 732 F.2d at 1577; MERGES & DUFFY, *supra* note 1, at 663; Lee & Butler, *supra* note 79, at 916.

⁸¹ See *In re Kahn*, 441 F.3d 977, 986 (Fed. Cir. 2006); *In re Dembiczak*, 175 F.3d 994, 999 (Fed. Cir. 1999), *abrogated by In re Gartside*, 203 F.3d 1305 (Fed. Cir. 2000) (stating best defense against hindsight-based obviousness analysis is to apply rigorously requirement for showing of teaching or motivation to combine prior art references). Past courts viewed the TSM test as an essential part of the nonobviousness inquiry. See *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1352 (Fed. Cir. 1998) (describing teaching, suggestion, or motivation to combine prior art as essential evidentiary component of obviousness holding); *In re Rouffet*, 149 F.3d 1350, 1359 (Fed. Cir. 1998) (stating Patent Appeals Board must specifically identify reasons why prior art would have motivated one of ordinary skill in art to select and combine references); *In re Fritch*, 972 F.2d 1260, 1265 (Fed. Cir. 1992) (holding examiner can satisfy burden of obviousness in light of combination only by showing some objective teaching leading to combination); *In re Fine*, 837 F.2d 1071, 1075 (Fed. Cir. 1988) (finding evidence of teaching or suggestion essential to avoid hindsight); *Ashland*, 776 F.2d at 297 (holding district court erred in concluding obviousness when it did not reveal any factual teachings, suggestions, or incentives from prior art showing propriety of combination).

⁸² See *Graham*, 383 U.S. at 36; *Monroe Auto Equip. Co. v. Heckethorn Mfg. & Supply Co.*, 332 F.2d 406, 412 (Fed. Cir. 1964) (warning many inventions seem obvious after production and noting courts should not fall into using hindsight); *In re Sprock*, 301 F.2d 686, 689 (C.C.P.A. 1962) (requiring application of prior art without reading in teachings of applicant’s invention); *In re Murray*, 268 F.2d 226, 230 (C.C.P.A. 1959) (same). One recent study concluded that individuals are cognitively incapable of

may seem obvious to someone evaluating a multimedia device to combine a cellular phone, touch screen, and music player into one gadget.⁸³ Such obviousness, however, may not have been apparent to the inventor at the time of invention.⁸⁴ Under the TSM test, the challenger must show something in the prior art that would have motivated the inventor to combine the invention's elements.⁸⁵ Secondary considerations of nonobviousness, however, are still relevant.⁸⁶ Thus, the inventor may overcome evidence of a teaching, suggestion, or motivation stemming from the prior art.⁸⁷

Various commentators have criticized the TSM test for being too formalistic.⁸⁸ Recent case law has also eroded courts' use of the test.⁸⁹

preventing hindsight bias from influencing their evaluations of nonobviousness. Gregory Mandel, *Patently Non-Obvious: Empirical Demonstration That the Hindsight Bias Renders Patent Decisions Irrational*, 67 OHIO ST. L.J. 1391, 1393 (2006); see also Gregory Mandel, *Patently Non-Obvious II: Experimental Study on the Hindsight Issue Before the Supreme Court in KSR v. Teleflex*, 9 YALE J.L. & TECH. 1, 16, 17 (2007) (concluding mock jurors informed of TSM test were no more likely to determine inventions non-obvious than they were in hindsight without any instruction).

⁸³ This example describes several portable electronic devices on the market. See Apple iPhone: Technical Specifications, <http://www.apple.com/iphone/specs.html> (last visited Jan. 29, 2008); HTC Touch: Specification, http://www.htc.com/product/03-product_htctouch.htm (last visited Jan. 29, 2008); The PRADA Phone By LG: Basic Specification, <http://www.pradaphonebylg.com/> (last visited Jan. 29, 2008).

⁸⁴ See 35 U.S.C. § 103(a) (2000); *Dembiczak*, 175 F.3d at 998-99; *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983).

⁸⁵ *Teleflex Inc. v. KSR Int'l Co.*, 119 Fed. App'x 282, 285 (Fed. Cir. 2005), *rev'd*, 127 S. Ct. 1727 (2007) (citing *TecAir, Inc. v. Denso Mfg. Mich. Inc.*, 192 F.3d 1353, 1359-60 (Fed. Cir. 1999); *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1572 (Fed. Cir. 1996)); see also *Bard*, 157 F.3d at 1352 (describing teaching, suggestion, or motivation to combine as essential evidentiary component of obviousness holding); *Rouffet*, 149 F.3d at 1359 (stating Patent Appeals Board must specifically identify motivation to select and combine references by one ordinarily skilled in art); *Fritch*, 972 F.2d at 1265 (holding examiner must show some objective teaching leading to combination to prove obviousness); *Fine*, 837 F.2d at 1075 (finding evidence of teaching or suggestion essential to avoid hindsight in nonobviousness analysis); *Ashland*, 776 F.2d at 297 (holding district court erred in concluding obviousness when it did not reveal any factual teachings, suggestions, or incentives from prior art showing propriety of combination).

⁸⁶ See *Graham*, 383 U.S. at 17-18; *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1290 (Fed. Cir. 2006) (stating TSM test informs *Graham* analysis and recognizing role of secondary considerations); *Gore*, 721 F.2d at 1553.

⁸⁷ See *Teleflex*, 119 F. App'x at 285; *Simmons Fastener Corp. v. Ill. Tool Works*, 739 F.2d 1573, 1575 (Fed. Cir. 1984); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983).

⁸⁸ MERGES & DUFFY, *supra* note 1, at 664 (citing FED. TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY, ch. 4, at 11 (2003), available at www.ftc.gov/os/2003/10/innovationrpt.pdf); NAT'L RESEARCH

Indeed, the Supreme Court has stated that although the TSM test provides helpful insight, courts should not apply it as a rigid formula.⁹⁰ Thus, courts still utilize the *Graham* inquiry as the primary framework for analyzing nonobviousness.⁹¹

C. Secondary Considerations

Secondary considerations are objective indications of nonobviousness focusing on factors extrinsic to the claimed invention.⁹² Such factors are commonly non-technical and rely upon economic or motivational concerns.⁹³ Courts use these real-world factors to assist them in evaluating nonobviousness.⁹⁴

The most common secondary considerations are the invention's commercial success, the extent of licensing, any long-felt need for the invention, and copying by others.⁹⁵ Other factors include the

COUNCIL, A PATENT SYSTEM FOR THE 21ST CENTURY 59 (Stephen A. Merrill, Richard C. Levin, & Mark B. Myers, eds., 2004); *see also* Transcript of Oral Argument at *41, *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007) (No. 04-1350), 2006 WL 3422210 (calling TSM test "misleading" and "irrational").

⁸⁹ *See KSR*, 127 S. Ct. at 1741; *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1260 (Fed. Cir. 2007); *Abbott Labs. v. Sandoz, Inc.*, 500 F. Supp. 2d 846, 851 (N.D. Ill. 2007).

⁹⁰ *KSR*, 127 S. Ct. at 1739-41.

⁹¹ *See id.* at 1739; *Dann v. Johnston*, 425 U.S. 219, 226 (1976); *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 464 F.3d 1356, 1360 (Fed. Cir. 2006); *Alza Corp.*, 464 F.3d at 1289-90; *In re Kahn*, 441 F.3d 977, 985 (Fed. Cir. 2006); *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1355 (Fed. Cir. 1999); *In re Lockwood*, 50 F.3d 966, 971 n.4 (Fed. Cir. 1995); *Lemelson v. Topper Corp.*, 450 F.2d 845, 847 (2d Cir. 1971).

⁹² *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *see Rosemount, Inc. v. Beckman Instruments, Inc.*, 727 F.2d 1540, 1546 (Fed. Cir. 1984); *see also In re De Blauwe*, 736 F.2d 699, 706 (Fed. Cir. 1984) (considering evidence of unexpected results as objective evidence); *Lindemann Maschinenfabrik GMBH v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1461 (Fed. Cir. 1984) (stating commercial success is always relevant in evaluating nonobviousness); *Jones v. Hardy*, 727 F.2d 1524, 1530-31 (Fed. Cir. 1984) (stating courts must consider objective indicia before legal conclusion of nonobviousness); *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 961 (Fed. Cir. 1983) (finding commercial success to be highly probative objective criterion relevant to nonobviousness); *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 1575 (Fed. Cir. 1983) (stating courts must consider objective evidence when available); *In re Sernaker*, 702 F.2d 989, 996 (Fed. Cir. 1983) (stating Patent Appeals Board must evaluate secondary considerations in connection with nonobviousness determinations); *Robbins, supra* note 73, at 1172.

⁹³ *See Graham*, 383 U.S. at 35-36; *Rosemount*, 727 F.2d at 1546; *Robbins, supra* note 73, at 1172.

⁹⁴ *See KSR*, 127 S. Ct. at 1734; *Graham*, 383 U.S. at 17-18; *Rosemount*, 727 F.2d at 1546; *Robbins, supra* note 73, at 1172.

⁹⁵ *See Jerome G. Lee, The Role of Secondary Considerations and Objective Evidence*

invention's unexpected results, others' failure to solve the problem addressed by the invention, and simultaneous invention.⁹⁶ Although this list is not exhaustive, courts have repeatedly recognized these factors as important objective indicia of nonobviousness.⁹⁷ Courts recognize commercial success as the most significant secondary consideration because it is often dispositive in determining nonobviousness.⁹⁸

Commercial success accounts for the actions of buyers; it infers the existence of economic incentives to solve a problem in society.⁹⁹ The reasoning is that because contemporaneous researchers either have failed or have not attempted to solve the problem, an invention's commercial success indicates nonobviousness.¹⁰⁰ Relevant evidence of commercial success includes market share, market growth, comparative sales volume, and displacement of competing prior art.¹⁰¹ Generally, market share or sales data alone is insufficient to support a finding of commercial success.¹⁰² The patentee must show

in Determining Obviousness Under 35 USC Section 103, 213 PLI/PAT 199, 211-51 (1985); Whelan, *supra* note 76, at 366.

⁹⁶ See *Diamond Rubber Co. v. Consol. Rubber Tire Co.*, 220 U.S. 428, 440-41 (1911) (stating copying by infringers is tribute to nonobviousness of invention); *Amstar Corp. v. Envirotech Corp.*, 730 F.2d 1476, 1483 (Fed. Cir. 1984) (stating striking or unexpected result is important to nonobviousness determination); *Hughes Aircraft Co. v. United States*, 717 F.2d 1351, 1360 (Fed. Cir. 1983) (listing failed efforts by others in list of objective evidence); see also Lee, *supra* note 95, at 211-51; Whelan, *supra* note 76, at 366.

⁹⁷ See Lee, *supra* note 95, at 211-37; Merges, *supra* note 38, at 820-32; Whelan, *supra* note 76, at 367-74; cases cited *supra* note 96.

⁹⁸ See *Simmons Fastener Corp. v. Ill. Tool Works*, 739 F.2d 1573, 1575-76 (Fed. Cir. 1984); *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1555 (Fed. Cir. 1983); *In re Tiffin*, 443 F.2d 394, 400 (C.C.P.A. 1971); Lee, *supra* note 95, at 211; Merges, *supra* note 38, at 823.

⁹⁹ See Robbins, *supra* note 73, at 1175.

¹⁰⁰ See *id.*; Whelan, *supra* note 76, at 369. See generally Merges, *supra* note 38, at 823-24 (discussing comparative success). Conversely, failure to achieve success in the market may contribute to a finding of obviousness. See *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1553 (Fed. Cir. 1983) (finding no commercialization and no commercial success).

¹⁰¹ See *Vandenberg v. Dairy Equip. Co.*, 740 F.2d 1560, 1567 (Fed. Cir. 1984); *Kan. Jack, Inc. v. Kuhn*, 719 F.2d 1144, 1150-51 (Fed. Cir. 1983); Robbins, *supra* note 73, at 1175.

¹⁰² See *Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1026-27 (Fed. Cir. 1985) (affording no weight to evidence of sales data alone without information regarding market share or profitability per unit); *Vandenberg*, 740 F.2d at 1567 (giving no weight to sales data without further indication of market share or comparative sales to previous model); *Kuhn*, 719 F.2d at 1151.

comparative success to other similar products on the market.¹⁰³ While persuasive evidence of commercial success is a strong indicator of nonobviousness, courts also evaluate other relevant secondary considerations before making a final decision.

Another important secondary consideration bearing on nonobviousness is the extent to which the patentee licenses his invention to competitors.¹⁰⁴ Successful licensing suggests nonobviousness because it shows that competitors believe in the patent's validity.¹⁰⁵ Instead of purchasing a license, competitors would copy the invention if they felt the invention were obvious and therefore invalidly patented.¹⁰⁶

An additional secondary consideration is the existence of a long-felt but unsolved need for the invention.¹⁰⁷ An invention that fulfills a long-felt need is not obvious; if it were, a competitor would have invented it earlier.¹⁰⁸ The patentee must prove the perceived need existed in the industry and her invention satisfied such need.¹⁰⁹

¹⁰³ See *Genmark*, 770 F.2d at 1026-27; *Vandenberg*, 740 F.2d at 1567; *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1382 (Fed. Cir. 1983); see also *Fromson v. Advance Offset Plate, Inc.*, 755 F.2d 1549, 1557 (Fed. Cir. 1985) (considering sales volumes of patentee, licensees, and alleged infringers in determining commercial success).

¹⁰⁴ See, e.g., *EWP Corp. v. Reliance Universal, Inc.*, 755 F.2d 898, 907-08 (Fed. Cir. 1985) (evaluating evidence of licensing as secondary consideration); *Whelan*, *supra* note 76, at 370 (discussing licensing as evidence of nonobviousness).

¹⁰⁵ See *Robbins*, *supra* note 73, at 1178; *Whelan*, *supra* note 76, at 370.

¹⁰⁶ See *Whelan*, *supra* note 76, at 370. The patentee must show that belief in validity actually motivated the licensing because other possible motivations for licensing exist. See *Iron Grip Barbell Co., Inc. v. USA Sports, Inc.*, 392 F.3d 1317, 1324 (Fed. Cir. 2004) (according evidence of three license agreements with competitors little significance because patentee did not show nexus between licenses and invention); *EWP*, 755 F.2d at 907-08; *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1539 (Fed. Cir. 1983); *Schwinn Bicycle Co. v. Goodyear Tire & Rubber Co.*, 444 F.2d 295, 300 (9th Cir. 1970) (finding licenses given for very low royalty payment not relevant to nonobviousness).

¹⁰⁷ See *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1360 (Fed. Cir. 1999); *In re Rouffet*, 149 F.3d 1350, 1355 (Fed. Cir. 1998); *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1555 (Fed. Cir. 1983) (holding patent for breathable waterproof material nonobvious in light of two long-felt needs).

¹⁰⁸ *Robbins*, *supra* note 73, at 1172.

¹⁰⁹ See *Vandenberg v. Dairy Equip. Co.*, 740 F.2d 1560, 1567 (Fed. Cir. 1984); *Orthopedic Equip. Co. v. All Orthopedic Appliances, Inc.*, 707 F.2d 1376, 1382 (Fed. Cir. 1983). Long-felt need does not appear to apply where federal regulation provides the impetus for invention. See *Beatrice Foods Co. v. Tsuyama Mfg. Co.*, Nos. 75 C 3451 & 75 C 3622, 1978 WL 21411, at *273 (N.D. Ill. May 31, 1978), *aff'd*, 619 F.2d 3 (7th Cir. 1979). *But see* *Envtl. Designs, Ltd. v. Union Oil Co. of Cal.*, 713 F.2d 693, 697 (Fed. Cir. 1983). One court recognized evidence of commercial success as proof that the

Evidence of attempts to copy the invention also implies nonobviousness because it shows the invention solved a problem that competitors failed to solve.¹¹⁰ Patentees must show such attempts resulted from a competitor's belief in the merits of the invention.¹¹¹ Courts have not given evidence of copying independent weight in nonobviousness analyses.¹¹² However, they have considered such evidence relevant when patentees present it along with other secondary considerations.¹¹³

Secondary considerations simplify the patentability inquiry by using non-technical information to evaluate an invention's nonobviousness.¹¹⁴ Secondary considerations also reduce the risk of hindsight bias by allowing courts to focus on conditions surrounding the invention's development.¹¹⁵ This helps to remove the focus from

patentee's invention filled some need in the market. See *Gore*, 721 F.2d at 1555.

¹¹⁰ See *Diamond Rubber Co. v. Consol. Rubber Tire Co.*, 220 U.S. 428, 440-41 (1911); *Vandenberg*, 740 F.2d at 1567; see also *Radio Steel & Mfg. Co. v. MTD Prods., Inc.*, 731 F.2d 840, 846 (Fed. Cir. 1984) (stating that copying of wheelbarrow design by alleged infringer was important secondary factor indicating nonobviousness); *Stratoflex*, 713 F.2d at 1541 (finding copying by alleged infringer may weigh substantially in determinations of nonobviousness even in face of prior art considerations).

¹¹¹ See *Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1028 (Fed. Cir. 1985); *Rosemount, Inc. v. Beckman Instruments, Inc.*, 727 F.2d 1540, 1544-45 (Fed. Cir. 1984); *Jones v. Hardy*, 727 F.2d 1524, 1531-32 (Fed. Cir. 1984). See generally Whelan, *supra* note 76, at 371 (discussing courts' treatment of copying by infringer as secondary consideration indicating nonobviousness).

¹¹² See *Genmark*, 770 F.2d at 1027-28 (stating evidence of copying alone is insufficient to show nonobviousness due to difficulty in establishing nexus); *Vandenberg*, 740 F.2d at 1567 (holding that copying should not be decisive factor in determining nonobviousness).

¹¹³ See *Panduit Corp. v. Dennison Mfg. Co.*, 774 F.2d 1082, 1099 (Fed. Cir. 1985) (allowing evidence of copying to show fulfillment of long-felt need and to prove nonobviousness).

¹¹⁴ See *Graham v. John Deere Co.*, 383 U.S. 1, 36 (1966); Robbins, *supra* note 73, at 1172; Whelan, *supra* note 76, at 366.

¹¹⁵ See *Graham*, 383 U.S. at 36; see also *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 873 (Fed. Cir. 1985), *overruled by* *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059 (Fed. Cir. 1998) (stating need for *Graham* findings to prevent tempting but forbidden use of hindsight in nonobviousness analysis); *Atlas Powder Co. v. E.I. DuPont de Nemours & Co.*, 750 F.2d 1569, 1574 (Fed. Cir. 1984) (espousing use of secondary considerations to prevent hindsight-based reasoning); *Vandenberg*, 740 F.2d at 1567 (stating consideration of secondary factors can prevent courts from resorting to impermissible hindsight analysis); *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553 (Fed. Cir. 1983) (stating objective secondary evidence serves to ensure against tempting use of hindsight when courts evaluate prior art).

the invention itself, thus reducing the likelihood that courts will read the inventor's own disclosure into the prior art.¹¹⁶

The Federal Circuit has actively shaped the role of secondary considerations in determining nonobviousness.¹¹⁷ It has interpreted *Graham* to require the use of secondary considerations as a fourth factual inquiry in nonobviousness analysis.¹¹⁸ As a result, courts now give secondary considerations significant weight.¹¹⁹ Indeed, some courts have gone as far as overturning a prior art prima facie case of obviousness on a strong showing of commercial success.¹²⁰

The Federal Circuit requires the party submitting evidence of secondary considerations to show a nexus between the evidence and the merits of the claimed invention.¹²¹ Unlike the *Graham* inquiry's

¹¹⁶ *Graham*, 383 U.S. at 36 (citing *Monroe Auto Equip. Co. v. Heckethorn Mfg. & Supply Co.*, 332 F.2d 406, 412 (6th Cir. 1964)); *In re Sporck*, 301 F.2d 686, 689 (C.C.P.A. 1962); *In re Murray*, 268 F.2d 226, 230 (C.C.P.A. 1959).

¹¹⁷ See cases cited *infra* notes 118-120.

¹¹⁸ See *Simmons Fastener Corp. v. Ill. Tool Works*, 739 F.2d 1573, 1575 (Fed. Cir. 1984); *Vandenberg*, 740 F.2d at 1567; *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 1549 (Fed. Cir. 1983); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983). The Federal Circuit adopted the position of its predecessor, the Court of Customs and Patent Appeals. See, e.g., *In re Fielder*, 471 F.2d 640, 644 (C.C.P.A. 1973) (stating courts must always evaluate evidence of commercial success before final decision).

¹¹⁹ See *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 896 (Fed. Cir. 1984) (stating objective evidence may constitute formidable obstacle to overcoming statutory presumption of validity); *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 961 (Fed. Cir. 1983) (stating secondary considerations constitute highly probative, objective criteria able to fully sustain legal conclusion of nonobviousness); *Simmons*, 739 F.2d at 1575-76; *Gore*, 721 F.2d at 1555 (stating courts should consider secondary evidence as integral part of nonobviousness analysis); *Stratoflex*, 713 F.2d at 1538; see also *In re De Blauwe*, 736 F.2d 699, 706 (Fed. Cir. 1984) (stating courts must always evaluate evidence of secondary considerations); *Lindemann Maschinenfabrik GMBH v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1461 (Fed. Cir. 1984) (stating commercial success is always relevant in evaluating nonobviousness); *Jones v. Hardy*, 727 F.2d 1524, 1530-31 (Fed. Cir. 1984) (stating courts must consider objective indicia before legal conclusion of nonobviousness); *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 1575 (Fed. Cir. 1983) (stating courts must consider objective evidence when available); *In re Sernaker*, 702 F.2d 989, 996 (Fed. Cir. 1983) (stating Patent Appeals Board must evaluate secondary considerations in connection with nonobviousness determinations).

¹²⁰ See *Simmons*, 739 F.2d at 1575-76; *In re Tiffin*, 443 F.2d 394, 400 (C.C.P.A. 1971).

¹²¹ See *Simmons*, 739 F.2d at 1575; *Solder Removal Co. v. U.S. Int'l Trade Comm'n*, 582 F.2d 628, 637 (C.C.P.A. 1978) (stating courts must establish nexus between invention and commercial success to be relevant to nonobviousness); see also *In re Thompson*, 545 F.2d 1290, 1295 (C.C.P.A. 1976) (requiring patentees to link commercial success to actual merits of invention); *In re Felton*, 484 F.2d 495, 501 (C.C.P.A. 1973) (stating courts must establish nexus between merits of invention and

first three prior art considerations, which focus on the invention itself, secondary considerations are relevant only by inference.¹²² Because secondary considerations focus on developments surrounding the invention, courts must make logical inferences to relate such factors to nonobviousness.¹²³ For example, commercial success rendering an invention nonobvious assumes that potential economic gain provides an incentive to invent.¹²⁴ If the patentee's invention is commercially successful, it is nonobvious because others attempting to achieve the same success failed to conceive of the solution.¹²⁵ The invention is nonobvious by inference because nonobviousness stems from outside factors and not from the invention's inherent character.¹²⁶ Requiring patentees to show a nexus between the merits of the invention and outside factors ensures courts weigh secondary considerations according to the facts of each case.¹²⁷ As such, the nexus requirement remains in place even after the Supreme Court provided greater clarity for nonobviousness determinations in *KSR*.¹²⁸

D. *KSR International Co. v. Teleflex Inc.*

The Supreme Court revisited the nonobviousness requirement in *KSR*.¹²⁹ In 2002, Teleflex sued *KSR International* ("KSR"), alleging KSR infringed its patent on an adjustable gas pedal assembly for motor vehicles.¹³⁰ KSR argued the patent was invalid because it failed to

evidence offered for evidence to be relevant); *In re Caveney*, 386 F.2d 917, 923 (C.C.P.A. 1967) (stating utilization of secondary considerations must inevitably await initial establishment of nexus between subttest and nonobviousness); *Merges*, *supra* note 38, at 824 n.84 (citing Edward. P. Walker, *Objective Evidence of Nonobviousness: The Elusive Nexus Requirement (Part I)*, 69 J. PAT. & TRADEMARK OFF. SOC'Y 175, 183 (1987)).

¹²² See *Graham v. John Deere Co.*, 383 U.S. 1, 35-36 (1966); *Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1026 (Fed. Cir. 1985) (quoting D. Chisum, Address at AIPLA Annual Meeting (Oct. 26, 1984), in 1984 AIPLA BULL. 618, 620), *overruled by* *Midwest Indus., Inc. v. Karavan Trailers, Inc.*, 175 F.3d 1356 (Fed. Cir. 1999); Whelan, *supra* note 76, at 365-66.

¹²³ See *Graham*, 383 U.S. at 35-36; *Robbins*, *supra* note 73, at 1172-73; Whelan, *supra* note 76, at 365-66.

¹²⁴ See Whelan, *supra* note 76, at 369.

¹²⁵ See *id.*

¹²⁶ See *Merges*, *supra* note 38, at 823-24; *Robbins*, *supra* note 73, at 1175; Whelan, *supra* note 76, at 365-66.

¹²⁷ See *Genmark*, 770 F.2d at 1026 (quoting Chisum, *supra* note 122, at 620); *Thompson*, 545 F.2d at 1295; *Felton*, 484 F.2d at 500-01.

¹²⁸ See *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1739-45 (2007) (requiring flexible and expansive approach to nonobviousness).

¹²⁹ *Id.*

¹³⁰ *Teleflex Inc. v. KSR Int'l Co.*, 298 F. Supp. 2d 581, 583-84 (E.D. Mich. 2003).

meet the nonobviousness requirement.¹³¹ The district court agreed and granted KSR's motion for summary judgment declaring the patent invalid under the TSM test.¹³² The Federal Circuit reversed, holding the district court had inadequately applied the TSM test.¹³³ The court stated the district court had failed to find sufficient motivation in the prior art to produce Teleflex's specific claimed invention.¹³⁴ Neither the prior art references nor express teachings provided adequate motivation because they addressed problems different from those Teleflex's invention sought to resolve.¹³⁵ KSR appealed the decision, and the Supreme Court granted review.¹³⁶

In reversing the Federal Circuit, the Supreme Court declared that the nonobviousness analysis requires a flexible, common sense approach.¹³⁷ Although the Court did not overrule the TSM test, it nevertheless stated that applying the test too rigidly would limit nonobviousness inquiries.¹³⁸ The Court observed that modern scientific fields are diverse, often containing little discussion of obvious combinations or techniques.¹³⁹ Market demands, rather than scientific literature, drive design.¹⁴⁰ As such, courts should have latitude in evaluating nonobviousness to avoid granting patent protection to non-innovative developments.¹⁴¹

The Court noted secondary considerations of commercial success were insufficient to show nonobviousness.¹⁴² The Court instead deferred to the district court, which found that Teleflex failed to show a nexus between the invention and evidence of commercial success.¹⁴³ The Court reversed the Federal Circuit, holding Teleflex's patent claim obvious under *Graham's* three-part inquiry.¹⁴⁴

KSR's expansive holding left many unsure of the implications of a new and more ambiguous standard of nonobviousness.¹⁴⁵ KSR seemed

¹³¹ *Id.* at 585.

¹³² *Id.* at 593-96.

¹³³ *Teleflex Inc. v. KSR Int'l Co.*, 119 F. App'x 282, 290 (Fed. Cir. 2005).

¹³⁴ *Id.* at 288.

¹³⁵ *Id.* at 288-89.

¹³⁶ *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1735 (2007).

¹³⁷ *Id.* at 1742.

¹³⁸ *Id.* at 1741.

¹³⁹ *Id.*

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.* at 1745.

¹⁴³ *Id.*; *Teleflex Inc. v. KSR Int'l Co.*, 298 F. Supp. 2d 581, 595-96 (E.D. Mich. 2003).

¹⁴⁴ *KSR*, 127 S. Ct. at 1746.

¹⁴⁵ See BRIAN T. YEH, CONG. RESEARCH SERV., AM. LAW DIV., THE OBVIOUSNESS

to allow greater subjectivity in nonobviousness determinations.¹⁴⁶ Indeed, some practitioners feared KSR placed the validity of all issued patents at risk.¹⁴⁷ Although it is too early to measure KSR's overall impact, litigants have already felt its ramifications in how courts evaluate secondary considerations of nonobviousness.¹⁴⁸

II. LEAPFROG ENTERPRISES, INC. V. FISHER-PRICE, INC.

The Federal Circuit received its first opportunity to apply the KSR decision in *Leapfrog*.¹⁴⁹ *Leapfrog* involved a learning toy designed to help young children read phonetically.¹⁵⁰ Leapfrog Enterprises ("Leapfrog") filed a patent infringement suit against Fisher-Price, alleging Fisher-Price manufactured the same device covered by Leapfrog's patent.¹⁵¹ In response, Fisher-Price argued the patent was invalid because it did not meet the nonobviousness requirement.¹⁵²

The district court ruled in favor of Fisher-Price, concluding the patent was invalid because Leapfrog failed to overcome a prior art showing of obviousness.¹⁵³ The court combined two prior art references in its analysis: first, the Bevan patent covering an electro-mechanical learning toy functionally similar to Leapfrog's patent claim; and second, Texas Instruments' Super Speak & Read ("SSR") device, a toy containing modern electronic components to help

STANDARD IN PATENT LAW: KSR INTERNATIONAL CO. V. TELEFLEX INC. 6 (2007) (on file with Library of Congress); John A. O'Brien, KSR International Co. v. Teleflex — *The Standard of Nonobvious Subject Matter*, 909 PLI/PAT 497, 517 (2007); Douglas W. Schelling, *Has the Bar Been Moved Higher?: Obviousness in Patent Law*, FED. LAW., July 2007, at 14; Ed Schlatter & John Heal, *After the Big One: Helping Your Client Find Opportunities After the Shake-Up to the Patent World*, ORANGE COUNTY LAW., Aug. 2007, at 24, 24-32.

¹⁴⁶ See generally KSR, 127 S. Ct. at 1741-42 (directing courts to use common sense and implicit prior art motivations in nonobviousness inquiries).

¹⁴⁷ See YEH, *supra* note 145, at 6; O'Brien, *supra* note 145, at 517; Schlatter & Heal, *supra* note 145, at 24.

¹⁴⁸ See generally *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157 (Fed. Cir. 2007) (invalidating patent despite substantial showing of secondary considerations); *Andersen Corp. v. Pella Corp.*, 500 F. Supp. 2d 1192 (D. Minn. 2007) (ruling secondary factors cannot rebut determination of obviousness); Schlatter & Heal, *supra* note 145, at 32 (discussing impact of KSR).

¹⁴⁹ *Leapfrog*, 485 F.3d at 1160-63.

¹⁵⁰ *Id.* at 1158.

¹⁵¹ *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, No. Civ.A. 03-927-GMS, 2006 WL 891001, at *1 (D. Del. Mar. 30, 2006).

¹⁵² *Id.* at *2. Alternatively, Fisher-Price also argued it did not infringe Leapfrog's patent. *Id.*

¹⁵³ *Id.* at *5. The court also ruled Fisher-Price did not infringe the patent. *Id.*

children identify letter patterns and build words.¹⁵⁴ Taken together, the Bevan patent and SSR device cover nearly all the elements of Leapfrog's learning toy.¹⁵⁵ The court concluded a person of ordinary skill in the art would find it obvious to update the Bevan patent with the SSR device's electronics.¹⁵⁶ Because Leapfrog's invention merely updated the Bevan device with modern components, the court invalidated Leapfrog's patent as obvious.¹⁵⁷ The court found Leapfrog presented substantial evidence of secondary considerations but concluded they were insufficient to overcome the prima facie case for obviousness.¹⁵⁸

The Federal Circuit affirmed the district court's ruling.¹⁵⁹ Recognizing KSR's common sense approach, the court stated it could not apply a rigid formula to evaluate nonobviousness, which is necessarily a fact-specific inquiry.¹⁶⁰ Some combinations are implicitly obvious to those skilled in the field of the invention.¹⁶¹ Updating prior art mechanical devices with modern electronics would have been obvious to a person skilled in the art of engineering children's learning toys.¹⁶² Thus, the court concluded Leapfrog's patent was invalid because it was virtually identical in function to the Bevan device.¹⁶³ Although Leapfrog introduced substantial evidence of secondary considerations, the evidence did not overcome the strength of the prior art case for obviousness.¹⁶⁴

III. ANALYSIS

The Federal Circuit's holding in *Leapfrog* is erroneous for several reasons.¹⁶⁵ First, the court did not give secondary considerations adequate treatment despite Leapfrog's substantial showing of commercial success and other evidence of nonobviousness.¹⁶⁶ Second,

¹⁵⁴ *Id.* at *4-5.

¹⁵⁵ *Id.* at *4.

¹⁵⁶ *Id.*

¹⁵⁷ *Id.* at *5.

¹⁵⁸ *Id.* at *4.

¹⁵⁹ *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162-63 (Fed. Cir. 2007).

¹⁶⁰ *Id.* at 1161.

¹⁶¹ *Id.*

¹⁶² *Id.* at 1162-63.

¹⁶³ *Id.* at 1162. The only differences from the Bevan patent were the obvious electronic updates covered by the SSR device. *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ See *infra* text accompanying notes 166-171.

¹⁶⁶ See discussion *infra* Part III.A; see also *Leapfrog*, 485 F.3d at 1162.

the court misinterpreted KSR's central holding and intended effects.¹⁶⁷ Nothing in *KSR* changed the relevance of secondary considerations in the nonobviousness analysis.¹⁶⁸ The court misinterpreted *KSR* as raising the nonobviousness standard.¹⁶⁹ Finally, the court's decision set a dangerous public policy precedent by allowing courts to disregard secondary considerations entirely in evaluating nonobviousness.¹⁷⁰ Such a precedent increases unpredictability, encourages abuse, and reduces incentives to assert valid patent rights.¹⁷¹ Thus, the Supreme Court should overturn the Federal Circuit's holding and reaffirm the significance of secondary considerations in nonobviousness determinations.¹⁷²

A. *Leapfrog Did Not Adequately Weigh Secondary Considerations Under Graham*

Under *Graham*'s three-part inquiry and the more recent TSM test, courts must fully evaluate secondary considerations.¹⁷³ This entails giving secondary considerations proper weight in conjunction with all other evidence bearing on nonobviousness.¹⁷⁴ *Leapfrog*'s failure to

¹⁶⁷ See discussion *infra* Part III.B.

¹⁶⁸ See discussion *infra* Part III.B.

¹⁶⁹ See discussion *infra* Part III.B.

¹⁷⁰ See discussion *infra* Part III.C.

¹⁷¹ See discussion *infra* Part III.C.

¹⁷² See discussion *infra* Parts III.A-C.

¹⁷³ See *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *Simmons Fastener Corp. v. Ill. Tool Works*, 739 F.2d 1573, 1575 (Fed. Cir. 1984); *Vandenberg v. Dairy Equip. Co.*, 740 F.2d 1560, 1567 (Fed. Cir. 1984); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983); see also *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 896 (Fed. Cir. 1984) (stating objective evidence may constitute formidable obstacle to overcoming statutory presumption of validity); *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 961 (Fed. Cir. 1983) (stating secondary considerations constitute highly probative, objective criteria able to sustain legal conclusion of nonobviousness); *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1555 (Fed. Cir. 1983) (stating courts must consider secondary evidence as integral part of nonobviousness analysis); *In re Fielder*, 471 F.2d 640, 644 (C.C.P.A. 1973) (stating courts should always evaluate evidence of commercial success before reaching final decision).

¹⁷⁴ See *Stratoflex*, 713 F.2d at 1538-39 (stating courts must consider secondary factors as part of all evidence, not just when they remain in doubt after evaluating prior art); see also *Lindemann Maschinenfabrik GMBH v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1461 (Fed. Cir. 1984) (stating commercial success is always relevant in evaluating nonobviousness); *Jones v. Hardy*, 727 F.2d 1524, 1530-31 (Fed. Cir. 1984) (stating courts must consider objective indicia before legal conclusion of nonobviousness); *Raytheon*, 724 F.2d at 961 (finding commercial success highly probative objective criterion relevant to nonobviousness); *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 1575 (Fed. Cir. 1983) (stating courts must consider

weigh these factors adequately in determining nonobviousness departs from the Supreme Court's and Federal Circuit's past treatment of secondary considerations.¹⁷⁵

Evaluating secondary considerations is part of the nonobviousness determination under *Graham*.¹⁷⁶ *Graham* dictated courts should apply its three-part inquiry for evaluating nonobviousness in light of contemporaneous motivational concerns.¹⁷⁷ The Federal Circuit has interpreted *Graham* to require the assessment of secondary factors as a fourth factual inquiry in nonobviousness analysis.¹⁷⁸ Furthermore, the Federal Circuit has declared patentees may rebut a prima facie case for obviousness with objective non-prior art evidence of nonobviousness.¹⁷⁹ Given the significant weight these courts accord to such evidence, secondary considerations are clearly indispensable to nonobviousness evaluations.¹⁸⁰

In *Leapfrog*, the Federal Circuit admitted Leapfrog provided substantial evidence of commercial success, praise, and long-felt need.¹⁸¹ The court, however, summarily dismissed these indicia of

objective evidence when available).

¹⁷⁵ See *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007); *Simmons*, 739 F.2d at 1575 (stating courts must consider all evidence of nonobviousness before reaching conclusion); *Vandenberg*, 740 F.2d at 1567 (stating courts should regard secondary considerations as fourth factual inquiry in nonobviousness analysis); *Stratoflex*, 713 F.2d at 1538 (stating courts must always evaluate evidence of secondary considerations when available).

¹⁷⁶ See *Graham*, 383 U.S. at 17-18; *infra* notes 177-178 and accompanying text.

¹⁷⁷ *Graham*, 383 U.S. at 17-18, 36. Courts have held excluding evidence of secondary factors from consideration is erroneous. See *Simmons*, 739 F.2d at 1575; *Vandenberg*, 740 F.2d at 1567; *Stratoflex*, 713 F.2d at 1538. The Federal Circuit adopted the position of its predecessor, the Court of Customs and Patent Appeals. See, e.g., *Fielder*, 471 F.2d at 644 (stating courts should always evaluate evidence of commercial success before they reach final decision).

¹⁷⁸ *Stratoflex*, 713 F.2d at 1538 (stating courts must always evaluate evidence of secondary considerations when available); see also *Simmons*, 739 F.2d at 1575; *Vandenberg*, 740 F.2d at 1567.

¹⁷⁹ See *Teleflex Inc. v. KSR Int'l Co.*, 119 Fed. App'x 282, 285 (Fed. Cir. 2005), *rev'd*, 127 S. Ct. 1727 (2007); *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1359 (Fed. Cir. 1999); see also *In re Fenn*, 639 F.2d 762, 765 (C.C.P.A. 1981); *In re Blondel*, 499 F.2d 1311, 1317 (C.C.P.A. 1974); *In re Murch*, 464 F.2d 1051, 1054 (C.C.P.A. 1972); *In re Ackermann*, 444 F.2d 1172, 1176 (C.C.P.A. 1971); *In re Orfeo*, 440 F.2d 439, 441 (C.C.P.A. 1971); *In re Fouche*, 439 F.2d 1237, 1241 (C.C.P.A. 1971); *In re Papesch*, 315 F.2d 381, 386-87 (C.C.P.A. 1963).

¹⁸⁰ See *supra* notes 176-180 and accompanying text.

¹⁸¹ *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007); *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, No. Civ.A. 03-927-GMS, 2006 WL 891001, at *4 (D. Del. Mar. 30, 2006).

nonobviousness in its final determination.¹⁸² The court pointed only to the strong prima facie case for obviousness in its reasoning.¹⁸³ It refrained from weighing evidence of nonobviousness from secondary considerations against evidence of obviousness from the prior art.¹⁸⁴ *Leapfrog* misapplied *Graham* by affirming the district court, which cursorily considered secondary factors only after it had already concluded obviousness based on prior art.¹⁸⁵

Evidence of secondary considerations is often the most relevant evidence available.¹⁸⁶ Indeed, persuasive evidence of secondary considerations can reverse a court's finding of obviousness based purely on the prior art.¹⁸⁷ The *Leapfrog* court deferred to the district court, which based its determination of obviousness solely on convincing prior art references.¹⁸⁸ In doing so, it failed to give appropriate weight to other substantial evidence indicating nonobviousness.¹⁸⁹

¹⁸² *Leapfrog*, 485 F.3d at 1162.

¹⁸³ *Id.*

¹⁸⁴ *Id.*

¹⁸⁵ *Id.*

¹⁸⁶ See *Simmons Fastener Corp. v. Ill. Tool Works*, 739 F.2d 1573, 1575-76 (Fed. Cir. 1984) (stating secondary considerations entitled to great weight); *Perkin-Elmer Corp. v. Computervision Corp.*, 732 F.2d 888, 896 (Fed. Cir. 1984) (stating objective evidence may constitute formidable obstacle to overcoming statutory presumption of validity); *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 961 (Fed. Cir. 1983) (stating secondary considerations constitute highly probative objective criteria able to sustain legal conclusion of nonobviousness); *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1555 (Fed. Cir. 1983) (stating courts must consider secondary evidence as integral part of nonobviousness analysis); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983) (stating courts must always consider evidence of secondary factors when present); see also *In re De Blauwe*, 736 F.2d 699, 706 (Fed. Cir. 1984) (stating courts must always evaluate evidence of secondary considerations); *Lindemann Maschinenfabrik GMBH v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1461 (Fed. Cir. 1984) (stating commercial success is always relevant in evaluating nonobviousness); *Jones v. Hardy*, 727 F.2d 1524, 1530-31 (Fed. Cir. 1984) (stating courts must consider objective indicia before legal conclusion of nonobviousness); *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 1575 (Fed. Cir. 1983) (stating courts must consider objective evidence when available); *In re Sernaker*, 702 F.2d 989, 996 (Fed. Cir. 1983) (stating Board of Patent Appeals must evaluate secondary considerations in connection with nonobviousness determinations).

¹⁸⁷ See *Simmons*, 739 F.2d at 1575-76; *Stratoflex*, 713 F.2d at 1538; *In re Tiffin*, 443 F.2d 394, 400 (C.C.P.A. 1971).

¹⁸⁸ See *Leapfrog*, 485 F.3d at 1162; *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, No. Civ.A. 03-927-GMS, 2006 WL 891001, at *4 (D. Del. Mar. 30, 2006) (stating *Leapfrog* points to only three secondary factors).

¹⁸⁹ *Leapfrog*, 2006 WL 891001, at *4.

Opponents may argue that the district court, to which *Leapfrog* deferred, merely found evidence of secondary considerations insufficient in light of the prior art evidence.¹⁹⁰ The proper role of secondary considerations in analyzing nonobviousness is still somewhat unclear.¹⁹¹ The Supreme Court has never articulated the proper weight courts should give secondary considerations under *Graham*'s three-part nonobviousness inquiry.¹⁹² Moreover, courts have broad discretion in reviewing a patent's validity.¹⁹³ Thus, the *Leapfrog* court properly exercised its discretion by deferring to the trial court's evaluation of secondary considerations.¹⁹⁴

Furthermore, opponents may contend the nonobviousness inquiry's case-specific nature necessarily renders it ambiguous.¹⁹⁵ Arguably, courts have the freedom to fashion their nonobviousness analyses as they see fit.¹⁹⁶ This freedom enables them to deal with varying facts and diverse inventive fields inherent in patent cases.¹⁹⁷ Thus, the *Leapfrog* court acted within its discretion in according secondary considerations relatively little weight.¹⁹⁸

¹⁹⁰ See *Newell Cos. v. Kenney Mfg. Co.*, 864 F.2d 757, 768 (Fed. Cir. 1988) (finding courts not obligated to draw inference of nonobviousness from secondary considerations); *Custom Accessories, Inc. v. Jeffrey-Allan Indus., Inc.*, 807 F.2d 955, 960 (Fed. Cir. 1986) (stating that secondary factors do not control nonobviousness conclusion); *EWP Corp. v. Reliance Universal Inc.*, 755 F.2d 898, 908 (Fed. Cir. 1985) (holding existence of licensing program not determinative of patentability and stating courts must appraise secondary considerations' evidentiary value).

¹⁹¹ See *Schlatter & Heal*, *supra* note 145, at 32; *Whelan*, *supra* note 76, at 364. See generally *MERGES & DUFFY*, *supra* note 1, at 712-13 (discussing courts' unpredictability when applying nonobviousness analyses).

¹⁹² *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966); *Merges*, *supra* note 46, at 833; *Whelan*, *supra* note 76, at 364.

¹⁹³ See *Cardinal Chem. Co. v. Morton Int'l, Inc.*, 508 U.S. 83, 100 (1993); *Sinclair & Carroll Co. v. Interchem. Corp.*, 325 U.S. 327, 330 (1945).

¹⁹⁴ See *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007).

¹⁹⁵ See *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1740-42 (2007); *Graham*, 383 U.S. at 17-18; *MERGES & DUFFY*, *supra* note 1, at 663.

¹⁹⁶ See *KSR*, 127 S. Ct. at 1739-42 (requiring flexible, common sense approach to nonobviousness analysis); *Alza Corp. v. Mylan Labs., Inc.*, 464 F.3d 1286, 1291 (Fed. Cir. 2006) (stating nonobviousness jurisprudence is flexible); *EWP Corp. v. Reliance Universal, Inc.*, 755 F.2d 898, 908 (Fed. Cir. 1985) (weighing evidentiary value of secondary considerations).

¹⁹⁷ See *KSR*, 127 S. Ct. at 1741; *Asyst Techs., Inc. v. Empak, Inc.*, No. C 98-20451 JF (EAI), 2007 WL 2255220, at *5 (N.D. Cal. Aug. 3, 2007) (stating person of ordinary skill in art would have bachelor's degree in computer science, electrical engineering, or industrial engineering); *Robbins*, *supra* note 73, at 1170.

¹⁹⁸ See *KSR*, 127 S. Ct. at 1741; *Leapfrog*, 485 F.3d at 1162.

These arguments are flawed because the *Leapfrog* court failed to evaluate secondary considerations in conjunction with its primary nonobviousness inquiry.¹⁹⁹ Supreme Court precedent dictates courts must consider evidence of secondary considerations in conjunction with prior art analysis.²⁰⁰ While *Graham* may have been unclear as to the weight these factors hold, it explicitly laid out the process for analyzing evidence of nonobviousness.²⁰¹ Evaluating secondary considerations is a necessary part of *Graham*'s nonobviousness inquiry.²⁰² Indeed, courts have held evidence of secondary considerations always bears on nonobviousness, not only when doubt remains after its primary inquiry.²⁰³ The *Leapfrog* court's disregard of secondary considerations based solely on the strength of the prior art's prima facie evidence of obviousness was therefore improper.²⁰⁴

¹⁹⁹ See *Leapfrog*, 485 F.3d at 1162.

²⁰⁰ See *United States v. Adams*, 383 U.S. 39, 51-52 (1966); *Graham*, 383 U.S. at 17-18. Courts have interpreted *Graham* to require consideration of secondary factors as a fourth factual inquiry. See *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1555 (Fed. Cir. 1983) (stating secondary considerations are integral part of nonobviousness analysis); *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538-39 (Fed. Cir. 1983) (stating courts must consider secondary factors in conjunction with all evidence, not just when they remain in doubt after prior art inquiry); see also *In re Sernaker*, 702 F.2d 989, 996 (Fed. Cir. 1983) (citing *In re Fielder*, 471 F.2d 640 (C.C.P.A. 1973)) (stating Patent Appeals Board must consider secondary considerations when present in determining nonobviousness); *In re Fielder*, 471 F.2d 640, 644 (C.C.P.A. 1973) (stating Patent Appeals Board must always evaluate evidence of commercial success before making final decision); *In re Mageli*, 470 F.2d 1380, 1384-85 (C.C.P.A. 1973); *In re Palmer*, 451 F.2d 1100, 1104 (C.C.P.A. 1971).

²⁰¹ See *Graham*, 383 U.S. at 17-18.

²⁰² See *id.*; *Stratoflex*, 713 F.2d at 1538-39; *Sernaker*, 702 F.2d at 996.

²⁰³ See *Simmons Fastener Corp. v. Ill. Tool Works*, 739 F.2d 1573, 1575 (Fed. Cir. 1984); *Vandenberg v. Dairy Equip. Co.*, 740 F.2d 1560, 1567 (Fed. Cir. 1984); *Stratoflex*, 713 F.2d at 1538-39; see also *Sernaker*, 702 F.2d at 996 (citing *Fielder*, 471 F.2d at 640) (stating Patent Appeals Board must consider secondary considerations in determining nonobviousness); *Fielder*, 471 F.2d at 644 (stating courts must evaluate evidence of commercial success before deciding nonobviousness); *Mageli*, 470 F.2d at 1384-85; *Palmer*, 451 F.2d at 1104.

²⁰⁴ See *Leapfrog*, 485 F.3d at 1162. Secondary considerations may rebut a prima facie case of obviousness. See *Teleflex Inc. v. KSR Int'l Co.*, 119 Fed. App'x 282, 285 (Fed. Cir. 2005), *rev'd*, 127 S. Ct. 1727 (2007); *WMS Gaming, Inc. v. Int'l Game Tech.*, 184 F.3d 1339, 1359-60 (Fed. Cir. 1999); see also *In re Fenn*, 639 F.2d 762, 765 (C.C.P.A. 1981) (allowing unexpected result to rebut prima facie case of obviousness); *In re Blondel*, 499 F.2d 1311, 1317 (C.C.P.A. 1974); *In re Murch*, 464 F.2d 1051, 1054 (C.C.P.A. 1972); *In re Ackermann*, 444 F.2d 1172, 1176 (C.C.P.A. 1971); *In re Orfeo*, 440 F.2d 439, 441 (C.C.P.A. 1971); *In re Fouche*, 439 F.2d 1237, 1241 (C.C.P.A. 1971) (holding indirect showing of unanticipated superiority will rebut prima facie case of obviousness); *In re Papesch*, 315 F.2d 381, 386-87 (1963) (stating evidence showing nonobviousness is stronger than unsupported conjecture).

B. Leapfrog Misinterpreted the Supreme Court's Holding in KSR

The *Leapfrog* court not only failed to adequately weigh secondary considerations, but it also misinterpreted the Supreme Court's holding in *KSR*.²⁰⁵ It applied *KSR* by employing a more flexible approach to nonobviousness.²⁰⁶ In doing so, however, it mistook *KSR*'s less rigid, common sense approach for a stricter evaluation of nonobviousness in general.²⁰⁷ Such an approach is problematic because it may lead courts to deny nonobvious patents as obvious.²⁰⁸ This undermines the U.S. Constitution's goals of promoting progress and the useful arts by discouraging inventions that satisfy fundamental patentability requirements.²⁰⁹

In applying *KSR*'s flexible analysis without accounting for secondary considerations, *Leapfrog* erroneously heightened the nonobviousness standard for determining patent validity.²¹⁰ *KSR*'s less rigid approach to nonobviousness does not necessarily mean the nonobviousness standard is stricter in all cases.²¹¹ *KSR*'s flexibility allows courts more latitude in reaching a conclusion of obviousness; it does not reduce the role of factors bearing on nonobviousness.²¹² Conflating these two concepts will likely lead to erroneous patent invalidations.²¹³ The *Leapfrog* court found Leapfrog's patent obvious without fully evaluating evidence of secondary considerations.²¹⁴ Thus, by ignoring

and therefore rejection based on obviousness must fail).

²⁰⁵ See *KSR*, 127 S. Ct. at 1739-45; *Leapfrog*, 485 F.3d at 1161-62.

²⁰⁶ See *KSR*, 127 S. Ct. at 1739-41; *Leapfrog*, 485 F.3d at 1161-62.

²⁰⁷ See *Leapfrog*, 485 F.3d at 1161-62.

²⁰⁸ See O'Brien, *supra* note 145, at 517; Schlatter & Heal, *supra* note 145, at 32 (fearing expansive interpretation of *KSR* could affect validity of all issued patents); *infra* notes 210-215 and accompanying text.

²⁰⁹ See generally U.S. CONST. art. I, § 8, cl. 8 (authorizing Congress to promote useful arts by securing exclusive rights to inventors); *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480 (1974) (noting stated objective in Constitution to promote progress of science and useful arts by granting Congress power to legislate in intellectual property areas); *Graham v. John Deere Co.*, 383 U.S. 1, 5-6 (1966) (discussing inherent command in Article I, Section 8, Clause 8 of Constitution to promote progress of useful arts).

²¹⁰ See *Leapfrog*, 485 F.3d at 1161-63.

²¹¹ See *KSR*, 127 S. Ct. at 1741 (reaffirming *Graham* inquiry and stating TSM test is not necessarily inconsistent with precedent).

²¹² See *id.* at 1739; *Graham*, 383 U.S. at 17-18 (directing strict observance of nonobviousness inquiry requirements to promote uniformity); *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1258-60 (Fed. Cir. 2007).

²¹³ See Schlatter & Heal, *supra* note 145, at 32 (fearing expansive interpretation of *KSR* could affect validity of all issued patents).

²¹⁴ See *Leapfrog*, 485 F.3d at 1162.

evidence supporting a finding of nonobviousness, *Leapfrog* implicitly and erroneously raised the nonobviousness standard for patentability.²¹⁵

Opponents argue that *KSR* supports a diminished role for secondary considerations in evaluating nonobviousness.²¹⁶ They note the Supreme Court has never addressed the weight courts should give to secondary considerations.²¹⁷ In *KSR*, the Court suggested the role of secondary considerations was subordinate to *Graham*'s three-part prior art inquiry.²¹⁸ Teleflex's evidence of commercial success was insufficient to overcome a finding of obviousness despite a presumption of the patent's validity.²¹⁹ Arguably, this result illustrates the Court's view that secondary considerations are ultimately inferior sources of evidence.²²⁰ Therefore, the *Leapfrog* court properly characterized secondary considerations as subordinate to the three-part primary factual inquiry set forth in *Graham*.²²¹ This is consistent with *KSR*, which upheld *Graham* and gave evidence of commercial success an inferior role in its analysis.²²²

This argument, however, fails to consider the nature of secondary considerations involved in *KSR*.²²³ The weight courts accord to secondary considerations depends on the type of evidence available.²²⁴ The *KSR* decision remains consistent with past treatment of secondary

²¹⁵ *Id.*

²¹⁶ See MERGES & DUFFY, *supra* note 1, at 683-84; *infra* notes 217-222 and accompanying text.

²¹⁷ See *Graham*, 383 U.S. at 17-18; Merges, *supra* note 46, at 833; Whelan, *supra* note 76, at 364.

²¹⁸ See *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1745 (2007); MERGES & DUFFY, *supra* note 1, at 684; Schlatter & Heal, *supra* note 145, at 32.

²¹⁹ *KSR*, 127 S. Ct. at 1745.

²²⁰ See *id.*; MERGES & DUFFY, *supra* note 1, at 683-84.

²²¹ See *Graham*, 383 U.S. at 17-18; *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007).

²²² See *KSR*, 127 S. Ct. at 1739 (affirming *Graham* inquiry); *Leapfrog*, 485 F.3d at 1162 (finding secondary considerations inadequate to overcome obviousness, despite "substantial evidence" of commercial success); see also Schelling, *supra* note 145, at 14 (noting Supreme Court did not change nonobviousness test in *KSR*).

²²³ See *KSR*, 127 S. Ct. at 1739; *infra* notes 224-226 and accompanying text.

²²⁴ See, e.g., *Merck & Co. v. Biocraft Labs., Inc.*, 874 F.2d 804, 809 (Fed. Cir. 1989) (concluding commercial success without presence of other secondary factors is insufficient to establish nonobviousness); *Cable Elec. Prods., Inc. v. Genmark, Inc.*, 770 F.2d 1015, 1027-29 (Fed. Cir. 1985) (stating evidence of copying alone is insufficient to show nonobviousness due to difficulty in establishing nexus); *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1555 (Fed. Cir. 1983) (allowing evidence of commercial success to show long-felt need in industry).

considerations, which gave less weight to commercial success in the absence of other secondary factors.²²⁵ In *KSR*, the Court gave less weight to secondary considerations in evaluating nonobviousness because only evidence of commercial success was available.²²⁶ The Court deferred to the district court, which properly considered that evidence.²²⁷ In failing to evaluate secondary considerations fully in determining nonobviousness, the *Leapfrog* court misinterpreted *KSR*'s central holding and intended effects.²²⁸

KSR and *Leapfrog* are factually distinguishable.²²⁹ Leapfrog presented evidence of commercial success, praise by others, and long-felt need.²³⁰ Taken together, these secondary factors carry greater weight than evidence of commercial success alone.²³¹ Therefore, *Leapfrog*'s rejection of secondary considerations is inconsistent with *KSR*, which reaffirmed the importance of secondary considerations.²³²

C. Leapfrog Leads to Unpredictability in the Patent System

Determining nonobviousness is one of the most difficult inquiries in patent law because quantifying technical accomplishment requires courts to engage in highly complex analyses.²³³ Indeed, this difficulty is manifest in the tests courts have developed in attempting to clarify the nonobviousness standard.²³⁴ Although the *Graham* inquiry

²²⁵ *Teleflex Inc. v. KSR Int'l Co.*, 298 F. Supp. 2d 581, 596 (E.D. Mich. 2003) (citing *Merck*, 874 F.2d at 809); see also *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 859 (Fed. Cir. 1985); cf. *Gore*, 721 F.2d at 1555 (finding patent nonobvious based on evidence of commercial success combined with other secondary considerations).

²²⁶ See *KSR*, 127 S. Ct. at 1738, 1745.

²²⁷ See *KSR*, 127 S. Ct. at 1745; *Teleflex*, 298 F. Supp. 2d at 595-96.

²²⁸ See *infra* notes 229-231 and accompanying text.

²²⁹ Compare *KSR*, 127 S. Ct. at 1738 (presenting evidence of commercial success as sole secondary factor), with *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007) (presenting evidence of commercial success, praise by others, and long-felt need in industry).

²³⁰ *Leapfrog*, 485 F.3d at 1162.

²³¹ See *KSR*, 127 S. Ct. at 1738; *Teleflex*, 298 F. Supp. 2d at 596 (citing *Merck & Co. v. Biocraft Labs., Inc.*, 874 F.2d 804, 809 (Fed. Cir. 1989)); see also *King*, 767 F.2d at 859; *Gore*, 721 F.2d at 1555; *In re Tiffin*, 443 F.2d 394, 400 (C.C.P.A. 1971).

²³² See *supra* notes 223-226 and accompanying text.

²³³ See *Graham v. John Deere Co.*, 383 U.S. 1, 10-13 (1966); *MERGES & DUFFY*, *supra* note 1, at 611-12; *Wagner & Strandburg*, *supra* note 58, at 96-97.

²³⁴ See *Graham*, 383 U.S. at 17-18 (creating factual inquiry to determine nonobviousness under federal statute); *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 267 (1851) (requiring ingenuity or invention to sustain patent validity); *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577 (Fed. Cir. 1984) (requiring suggestion or

provides some direction, courts still struggle with making an ultimate determination of nonobviousness because of the test's ambiguous nature.²³⁵ Similarly, the TSM test, while more concrete, may heavily restrict nonobviousness analysis when courts apply it too rigidly.²³⁶

Courts had a relatively easier time analyzing nonobviousness in the nineteenth century.²³⁷ At the time, an invention's level of technical sophistication was such that judges could evaluate nonobviousness using only their innate intelligence.²³⁸ In time, scientific advances in areas such as electronics and chemistry made nonobviousness inquiries more difficult for judges lacking specialized training.²³⁹ Thus, courts and legal scholars developed secondary considerations to assist judges in evaluating nonobviousness in light of more highly technical facts.²⁴⁰

Depriving secondary considerations of meaningful weight reintroduces uncertainty into the patent system.²⁴¹ Given the variety of highly specialized fields today, facts have become more technical than ever before.²⁴² The *Leapfrog* decision forces courts to rely

incentive to combine prior art references to prove obviousness). See generally MERGES & DUFFY, *supra* note 1, ch. 7. (discussing evolution of nonobviousness standard).

²³⁵ See *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1537 (Fed. Cir. 1983) (criticizing *Graham* for focusing on differences between patent and prior art and stating such differences should only aid final determination of nonobviousness); MERGES & DUFFY, *supra* note 1, at 663 (stating nonobviousness may necessarily require common sense approach that courts cannot reduce to verbal formula).

²³⁶ KSR, 127 S. Ct. at 1741; *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1259-60 (Fed. Cir. 2007); *Wagner & Strandburg*, *supra* note 58, at 101.

²³⁷ Robbins, *supra* note 73, at 1169-70; *infra* notes 238-240 and accompanying text.

²³⁸ See *Brown v. District of Columbia*, 130 U.S. 87, 100-03 (1889); *Smith v. Goodyear Dental Vulcanite Co.*, 93 U.S. 486, 492-97 (1876); *Hotchkiss*, 52 U.S. at 257-60; Robbins, *supra* note 73, at 1169-70.

²³⁹ Robbins, *supra* note 73, at 1170; Whelan, *supra* note 76, at 357 (citing *Graham*, 383 U.S. at 36; Robbins, *supra* note 73, at 1170); *cf.* *Ethicon Endo-Surgery, Inc. v. U.S. Surgical Corp.*, 93 F.3d 1572, 1577 (Fed. Cir. 1996) (utilizing pre-trial "Markman" hearings to become familiar with technology at issue before performing claim interpretation). Expert witnesses at trial were unreliable due to the adversarial nature of expert testimony. See *Holstenson v. V-M Corp.*, 198 F. Supp. 779, 787 (W.D. Mich. 1961), *rev'd*, 325 F.2d 109 (6th Cir. 1963); Robbins, *supra* note 73, at 1170.

²⁴⁰ See *Graham v. John Deere Co.*, 383 U.S. 1, 35-36 (1966); Robbins, *supra* note 73, at 1171-72; Whelan, *supra* note 76, at 357-58.

²⁴¹ See Robbins, *supra* note 73, at 1170-71; *infra* notes 242-244 and accompanying text.

²⁴² See *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007) (discussing breadth of modern inventive pursuits); *Graham*, 383 U.S. at 19-24, 35-36; Rochelle Cooper Dreyfuss, *The Federal Circuit: A Case Study in Specialized Courts*, 64 N.Y.U. L. REV. 1, 2 (1989); John Seabrook, *The Flash of Genius*, THE NEW YORKER, Jan. 11, 1993, http://www.newyorker.com/archive/1993/01/11/1993_01_11_038_TNY_CARDS_0003_63341 (stating modern patent cases often involve technical issues most judges do not

primarily on *Graham*'s highly scientific three-part prior art inquiry, increasing the level of technical sophistication required to evaluate nonobviousness.²⁴³ It promotes uncertainty by sanctioning courts to disregard secondary considerations, making nonobviousness analysis more unpredictable.²⁴⁴ Such uncertainty eviscerates the nonobviousness requirement, thus undermining the entire patent system.²⁴⁵

CONCLUSION

Nonobviousness, novelty, and utility embody the quid pro quo of the federal patent system.²⁴⁶ These requirements ensure inventions provide sufficient societal benefit to warrant giving their inventors exclusive patent rights.²⁴⁷ Nonobviousness has particular significance because it often serves as the final threshold inventions must clear in proving patentability.²⁴⁸ Indeed, determining nonobviousness is difficult for courts because it usually requires a nebulous assessment of technical merit.²⁴⁹ Courts use secondary considerations to aid their nonobviousness analyses and recognize their value as objective sources of evidence.²⁵⁰

understand).

²⁴³ See *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1162 (Fed. Cir. 2007). One should not confuse unpredictability in the outcome of nonobviousness determinations with inherent uncertainty in certain fields of art. See *MERGES & DUFFY*, *supra* note 1, at 680. The nonobviousness standard may encourage research in “unpredictable arts,” such as chemistry, at the expense of research having more foreseeable outcomes. *Merges*, *supra* note 46, at 2.

²⁴⁴ See discussion *supra* Part III.A-C.

²⁴⁵ See discussion *supra* Part III.C.

²⁴⁶ See *Graham*, 383 U.S. at 17-18 (creating factual inquiry to determine nonobviousness under federal statute); *Hotchkiss v. Greenwood*, 52 U.S. (11 How.) 248, 267 (1851) (requiring ingenuity or invention to sustain patent validity); *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577 (Fed. Cir. 1984) (requiring suggestion or incentive to combine prior art references to prove obviousness). See generally *MERGES & DUFFY*, *supra* note 1, ch. 7. (discussing evolution of nonobviousness standard); *Merges*, *supra* note 38, at 812 (discussing gatekeeping role of nonobviousness requirement in filtering unpatentable inventions).

²⁴⁷ See *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150-51 (1989); *Graham*, 383 U.S. at 10-11; *cf.* *United States v. Dubilier Condenser Corp.*, 289 U.S. 178, 186 (1933) (stating disclosure requirement and ensuing benefit to community is part of consideration for receiving patent protection).

²⁴⁸ See *MERGES & DUFFY*, *supra* note 1, at 611-12; *Merges*, *supra* note 38, at 812 (discussing gatekeeping role of nonobviousness requirement in filtering unpatentable inventions).

²⁴⁹ See *MERGES & DUFFY*, *supra* note 1, at 612.

²⁵⁰ *Graham*, 383 U.S. at 17-18; see *Robbins*, *supra* note 73, at 1172. Courts and

The *Leapfrog* court erred by failing to weigh and apply secondary considerations appropriately in analyzing nonobviousness.²⁵¹ The court misinterpreted the Supreme Court's most recent jurisprudence regarding the nonobviousness standard.²⁵² Furthermore, the court's holding leads to unpredictability and encourages abuse of the patent system.²⁵³ Raising the nonobviousness threshold and increasing uncertainty in the system reduces incentives for patentees and ultimately undermines progress in the useful arts.²⁵⁴ Therefore, the Supreme Court should reverse *Leapfrog* to protect the patent system, encourage the advancement of science, and safeguard the growth of human knowledge.²⁵⁵

commentators also refer to secondary considerations as objective evidence of nonobviousness. See *Rosemount, Inc. v. Beckman Instruments, Inc.*, 727 F.2d 1540, 1546 (Fed. Cir. 1984); see also *In re De Blauwe*, 736 F.2d 699, 706 (Fed. Cir. 1984) (considering evidence of unexpected results as objective evidence); *Lindemann Maschinenfabrik GMBH v. Am. Hoist & Derrick Co.*, 730 F.2d 1452, 1461 (Fed. Cir. 1984) (stating commercial success is always relevant in evaluating nonobviousness); *Jones v. Hardy*, 727 F.2d 1524, 1530-31 (Fed. Cir. 1984) (stating courts must consider objective indicia before legal conclusion of nonobviousness); *Raytheon Co. v. Roper Corp.*, 724 F.2d 951, 961 (Fed. Cir. 1983) (finding commercial success to be highly probative objective criterion relevant to nonobviousness); *Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 1575 (Fed. Cir. 1983) (stating courts must consider objective evidence when available); *In re Sernaker*, 702 F.2d 989, 996 (Fed. Cir. 1983) (stating Patent Appeals Board must evaluate secondary considerations in connection with nonobviousness determinations).

²⁵¹ See discussion *supra* Part III.A (arguing courts must give secondary considerations substantial weight when present).

²⁵² See discussion *supra* Part III.B (arguing adequate review of secondary considerations is consistent with KSR).

²⁵³ See discussion *supra* Part III.C (discussing social benefits of secondary considerations).

²⁵⁴ See discussion *supra* Part III.

²⁵⁵ See generally U.S. CONST. art. I, § 8, cl. 8 (authorizing Congress to promote science and useful arts by securing exclusive rights to inventors); *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480 (1974) (noting stated objective in Constitution to promote progress of science and useful arts by granting Congress power to legislate in intellectual property area); *Graham*, 383 U.S. at 5-6 (discussing inherent command in Article I, Section 8, Clause 8 of Constitution to promote progress of useful arts).