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Duck, Duck, Bilski: Searching for a Law-Progress Equipoise

Eric Golas Salbert

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DUCK, DUCK, *BILSKI*: SEARCHING FOR A LAW-PROGRESS EQUIPOISE

ERIC GOLAS SALBERT*

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I. INTRODUCTION

Moore's Law generally asserts that the transistor capacity on a computer processing unit increases exponentially over time.¹ To exemplify, in 1971, Intel's first microprocessor contained 2,300 transistors and was used in simple electronic pocket calculators and by 2007 Intel was manufacturing microprocessors

* Juris Doctor Candidate, Spring 2010, Pepperdine University School of Law; B.B.A., Belmont University, 2007. I would like to thank my family and friends for their support as well as the 2008-10 staff of *The Pepperdine Journal of Business, Entrepreneurship & the Law* for their excellent editorial work.

¹ 60 Years of the Transistor: 1947-2007, <http://www.intel.com/technology/timeline.pdf> (last visited Feb. 20, 2010).

containing 820,000,000 transistors used in personal computers capable of near-instantaneous worldwide communication over the Internet.² When the framers of the Constitution drafted the empowering words, “To promote the Progress of Science and useful Arts,”³ could they foresee such a blistering pace of innovation? Have courts been able to maintain the balance between progress and limited monopolies? The history supporting modern principles aimed at spurring useful inventions is discussed in Part II of this note.⁴ Then, in Parts III and IV, the facts surrounding a business method patent are described and a decision from the United States Court of Appeals for the Federal Circuit confronting fundamental questions pertinent to the successful maintenance of the United States patent system is explained.⁵ Next, the impact of that decision is analyzed in Part V.⁶ Lastly, the conclusion is set out in Part VI.⁷

II. BACKGROUND

Modern patents may generally be thought of as “a grant of monopoly power by the state over the commercial exploitation of an invention for a limited period.”⁸ However, precursors to patents have been even more broadly defined⁹ and understood to be the sovereign’s rights rather than property rights.¹⁰ Drawing similar distinctions and tracing the development of patent law has enabled the United States Supreme Court to glean the probable intent and understandings of bygone legislators when applying existing statutes to new issues.¹¹

While the notion of a state grant of exclusive rights for inventions in return for its release to the public is commonly thought to be rooted in Italy,¹² English practices are most relevant when discussing the origins of American patent law.¹³ Early on, the kings of England issued charters, letters patent, and letters close.¹⁴ These instruments were methods for the crown to conduct various affairs¹⁵ and

² *Id.*

³ U.S. CONST. art. I, § 8, cl. 8.

⁴ *See infra* Part II.

⁵ *See infra* Part III–IV.

⁶ *See infra* Part V.

⁷ *See infra* Part VI.

⁸ See Edward C. Walterscheid, *The Early Evolution of United States Patent Law: Antecedents (Part I)*, 76 J. PAT. & TRADEMARK OFF. SOC’Y 697, 700 (1994).

⁹ *Id.*

¹⁰ *Id.* at 715.

¹¹ *See e.g.*, *Gottschalk v. Benson*, 409 U.S. 63, 64–65 (1972).

¹² *See e.g.*, Walterscheid, *supra* note 8, at 707–15 (discussing a 1474 Venetian enactment as being the first known patent statute).

¹³ *See id.* at 698 (“[T]he English common law relating to patents was what was best known in the infant United States.”).

¹⁴ *Id.* at 700–01. Charters were recorded on Charter Rolls and date from 1199 to 1515. *Id.* Letters patent were recorded on Patent Rolls and date from 1202 through the twenty-first century. *Id.* Letters Close were recorded on Close Rolls and date from 1205 through the twenty-first century. *Id.*

¹⁵ *Id.* at 701 (“Initially, these documents related primarily to the royal prerogatives, the revenue of the realm, and the various branches of foreign affairs as well as grants and confirmations of office and privileges, pardons, charters, proclamations, and commissions.”).

functioned more broadly than current American patents.¹⁶ Akin to modern American patents, royal grants and confirmation of privilege by letters patent were eventually used by the crown to grant privileges to inventors concerning their inventions.¹⁷

Early on, charters were used to effectively create group monopolies where members of a chartered guild had the exclusive right to produce certain goods¹⁸ or practice a particular craft.¹⁹ These group monopolies were municipal or regional²⁰ and therefore could locally regulate economic metrics such as prices, wages, working conditions, and quality of goods.²¹ However, national development re-oriented economic perspectives and revealed the local chartered group monopolies to be in contradiction to the national economic wellbeing.²² If national regulation was the clear answer to maintaining economic wellbeing, letters patent for a monopoly were likely a suggested instrumentality for achieving transition to a nationalized economy.²³ At the least, letters patent came to be implemented in a national policy that was in sharp contrast to the antecedent practice of granting local monopolies by charter.²⁴

During the reign of Queen Elizabeth I, patents issued to create a monopoly were rationalized by various considerations.²⁵ At least initially, these patents granting monopoly were primarily issued to foster economic self-sufficiency in England.²⁶ This objective was promoted by issuing patents of monopoly to those persons, regardless of nationality, who would introduce a desired trade or industry in England.²⁷ While patents of monopoly for inventions might arguably serve the purpose of fostering economic self-sufficiency, Jacobus Acontius urged that individual interests were of great concern as well.²⁸ Acontius petitioned to have a monopoly for his invention because “[n]othing is more honest than that those who, by searching, have found out things useful to the public should have some fruits of their rights and labors, as meanwhile they abandon all other modes of gain, are at

¹⁶ *Id.* at 700. Moreover, charters and letters patent performed similar functions as public directives, but differed in form. *Id.* Letters close were private instructions to individuals. *Id.*

¹⁷ *Id.* at 701. Modern patents can be thought of as a particular type of the early letters patent. See F. SCOTT KIEFF ET AL., *PRINCIPLES OF PATENT LAW: CASES AND MATERIALS* 2 & n.7 (4th ed. 2008).

¹⁸ Edward C. Walterscheid, *The Early Evolution of United States Patent Law: Antecedents (Part 2)*, 76 J. PAT. & TRADEMARK OFF. SOC’Y 849, 851 (1994).

¹⁹ *Id.*

²⁰ *Id.* at 852.

²¹ *Id.* at 851.

²² *Id.* at 852.

²³ *Id.* at 853.

²⁴ Walterscheid, *supra* note 18, at 853–54.

²⁵ See *id.* at 853–54, 870–71 (“Two reasons were typically given for the monopoly grant: (a) to introduce new trade and industry into the realm, and (b) to serve as a means of recompensing the patentee for the costs and risks associated with the enterprise.”). Patents issued during this time were unique in that they were largely for grants of monopoly whereas previous patents granted privileges only. *Id.* at 862–63.

²⁶ See *id.* at 855–56.

²⁷ *Id.* Interestingly, desired trades or industries were those that exhibited features common to modern patents such as novelty. *Id.*

²⁸ *Id.* at 854–55.

much expense in experiments, and often sustain much loss.”²⁹

Ultimately, a patent was issued to Acontius³⁰ despite the suspect nature of monopoly grants³¹ because, presumably, it was perceived to benefit England.³² Patents issued for new inventions and the importation of new industries or trades into England were, as a general matter, favorably accepted.³³

Not all Elizabethan patents of monopoly were regarded as beneficial, however, and these came to be known as “odious monopolies.”³⁴ For instance, although beneficial, serious abuses occurred through patents licensing patentees to dispense with statutes forbidding the import, export, and transportation of particular commodities.³⁵ A hotly contested class was patents granting the power to supervise an existing trade or industry.³⁶ Lastly, in clear contravention of the common law and highly despised were patents granted for the exclusive right to engage in an existing trade or industry.³⁷ These three general categories of “odious monopolies” were suspected of contributing to a prevalent industrial depression,³⁸ characterized by a “hindrance to trade and manufacture, high prices, inferior goods, and unemployment.”³⁹ Moreover, they often delegated the dispensing power of the crown—effectively conferring the power of the state onto individual patentees.⁴⁰

Parliament set out to quell, through legislative enactment, the loathsome “odious monopolies” during the November 1601 session,⁴¹ but Queen Elizabeth I was able to dissuade against possible parliamentary usurpation of her claimed power to grant letters patent.⁴² The solution: have existing patents, but not future ones, tried for their validity in common law courts.⁴³ This resolution resulted in at

²⁹ *Id.* at 854. Acontius obtained a patent for his invention in 1565. *Id.* at 855.

³⁰ Walterscheid, *supra* note 18, at 855.

³¹ *Id.* at 862–63.

³² *Id.* at 852–53, 862–63.

³³ *Id.* at 864.

³⁴ *Id.* at 862–63. It has been noted that Queen Elizabeth I granted such patents not out of any actual financial interest, but rather her frugal tendencies combined with unscrupulous court suitors were at fault. *Id.* at 864–65.

³⁵ *Id.* at 864.

³⁶ Walterscheid, *supra* note 18, at 864.

³⁷ *Id.*

³⁸ *Id.* at 863.

³⁹ *Id.* at 865.

⁴⁰ *Id.* at 864. These state powers included the “right of supervision, search, seizure, and arrest of infringers, as well as the recovery of fines or penalties for infringement.” *Id.*

⁴¹ *Id.* at 865–66. Originally, Parliament introduced a bill named “Act for the Explanation of the Common Law in Certain Cases of Letters Patents.” *Id.* at 865.

⁴² Walterscheid, *supra* note 18, at 865–67. Sir Francis Bacon went before Parliament on behalf of the queen to inform the legislature that the queen would grant patents for desirable reasons. *See id.* Parliament did not consider this to be an adequate response to the atrocities created by existing monopoly patents. *Id.* at 866. Elizabeth I herself abated Parliament’s anxiety in a message to the House of Commons wherein she agreed to have her patents tried for validity in common law courts in exchange for the bill before Parliament to be discarded. *Id.*

⁴³ *Id.* at 866.

least two notable cases: *Darcy v. Allein*⁴⁴ and *The Clothworkers of Ipswich*.⁴⁵ Both of these cases noted the general invalidity of a patent granting a monopoly⁴⁶ except where the patent was granted for a limited time and dealt with either establishing a new trade within England⁴⁷ or the discovery of something new and useful.⁴⁸

When King James I succeeded Queen Elizabeth I the tension between the crown and Parliament regarding the power to regulate letters patent had not been remedied.⁴⁹ Further, James I implemented a policy for granting patents that was nearly the same as Elizabeth I's.⁵⁰ This relative lack of change may have been the problem as public outrage concerning "odious monopolies" continued to mount while patent policy hung in stasis.⁵¹ In any event, King James I assented when Parliament decided to firmly root the law of patents within what became known as the 1623 Statute of Monopolies.⁵² This was the first statutory basis for patent law in England and remained the only statutory basis for two hundred years.⁵³ Moreover, it was during this time that both the United States Constitution was ratified with a provision for legislative power over patents⁵⁴ and the first American patent statute was enacted.⁵⁵

During the Constitutional Convention, James Madison of Virginia and Charles Pinckney of South Carolina discussed the necessity of federal jurisdiction over patents and copyrights.⁵⁶ Following review by the Drafting Committee of the Convention, their proposed provisions were merged into one provision reading, "To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries."⁵⁷ Unanimously adopted without a dissenting voice,⁵⁸ this

⁴⁴ *Id.* at 867 (citing *Darcy v. Allein*, (1602) 72 Eng. Rep. 1260 (K.B.)).

⁴⁵ *Id.* at 869 (citing *The Clothworkers of Ipswich*, (1615) 78 Eng. Rep. 147 (K.B.)).

⁴⁶ *Id.* at 868–69 (stating, in *The Clothworkers of Ipswich*, that there was no power to grant monopolies "for that is to take away free trade").

⁴⁷ *Id.* at 869 (quoting, from *Darcy*, that monopoly patents were valid "where any man by his own charge and industry, or by his own wit or invention doth bring any new trade into the realm," and quoting, from *The Clothworkers of Ipswich*, that monopoly patents were valid "if a man hath brought in . . . a new trade within the kingdom").

⁴⁸ Walterscheid, *supra* note 18, at 869 (quoting, from *Darcy*, that monopoly patents were valid for "any engine tending to the furtherance of a trade that never was used before," and quoting, from *The Clothworkers of Ipswich*, that monopoly patents were valid where "a man hath made a new discovery of any thing").

⁴⁹ *See id.* at 871.

⁵⁰ *Id.*

⁵¹ *Id.* at 873.

⁵² *Id.*

⁵³ *Id.* at 874.

⁵⁴ U.S. CONST. art. I, § 8, cl. 8 (ratified on June 21, 1788).

⁵⁵ Patent Act of 1790, ch. 7, 1 Stat. 109 (1790).

⁵⁶ S. REP. NO. 82-1979 (1952), *reprinted in* 1952 U.S.C.C.A.N. 2394, 2396.

⁵⁷ *Id.* The merging of Madison's and Pinckney's proposed provisions is apparent after dissecting the final provision into a copyright provision and a patent provision. *Id.* "[T]o promote the progress of science by securing for limited times to authors the exclusive right to their writings" evidences the copyright provision whereas "to promote the progress of useful arts by securing for limited times to inventors the exclusive right to their discoveries" evidences the patent provision. *Id.*

⁵⁸ *Id.*

provision was engrained in Article I, Section 8, Clause 8 of the United States Constitution.⁵⁹ Congress' constitutional power to grant patent rights to inventors was thereby established.⁶⁰

Although Article I, Section 8, Clause 8 was unanimously adopted, substantial doubts concerning the granting of patents persisted for some time.⁶¹ The month following ratification of the Constitution, Thomas Jefferson sent a letter from France to James Madison, "urging a Bill of Rights provision restricting monopoly, and as against the argument that limited monopoly might serve to incite 'ingenuity,' he argued forcefully that 'the benefit even of limited monopolies is too doubtful to be opposed to that of their general suppression.'"⁶²

In 1789 and after the Bill of Rights had been drafted, Jefferson again wrote to Madison, this time stating he would have liked a provision allowing monopolies for a limited term only for literature and inventions.⁶³

Not only did statesmen privately debate the probable integrity of any system for granting patent monopolies, but a more public discourse was under way.⁶⁴ During the first session of Congress, South Carolina Representative Aedanus Burke presciently noted that drafting a bill upon improvements or inventions in the useful arts would be a difficult task that would occasion a substantial measure of discussion.⁶⁵ On January 8, 1790, President George Washington contributed the following discourse:

The advancement of agriculture, commerce, and manufactures, by all proper means, will not, I trust, need recommendation. But I cannot forbear intimating to you the expediency of giving effectual encouragement as well to the introduction of new and useful inventions from abroad, as to the exertions of skill and genius in producing them at home . . . Nor am I less persuaded that you will agree with me in opinion, that there is nothing which can better deserve your patronage than the

⁵⁹ U.S. CONST. art. I, § 8, cl. 8.

⁶⁰ *Id.* Placement of the Patent and Copyright Clause within Article I, Section 8 specifically identifies the provision as one of Congress' enumerated powers. *Id.*; see generally *McCulloch v. Maryland*, 17 U.S. 316, 405 (1819):

This government is acknowledged by all, to be one of enumerated powers. The principle, that it can exercise only the powers granted to it, would seem too apparent, to have required to be enforced by all those arguments, which its enlightened friends, while it was depending before the people, found it necessary to urge; that principle is now universally admitted.

A corollary principle is that patents are a right created through a government grant. ROBERT L. HARMON, *PATENTS & THE FEDERAL CIRCUIT* § 1.2 (8th ed. 2007). It must be noted that this constitutional grant of power is also recognized as a limitation in order to prevent the inequities that arose before the 1623 Statute of Monopolies. *Graham v. John Deere Co.*, 383 U.S. 1 (1966).

⁶¹ See *Graham*, 383 U.S. at 7–11 (1966) (discussing Thomas Jefferson's critical role in debating the propriety of patents and stating that "[t]he difficulty of formulating conditions for patentability was heightened by the generality of the constitutional grant").

⁶² *Id.* at 7–8 (quoting V WRITINGS OF THOMAS JEFFERSON 47 (Ford ed., 1895)).

⁶³ *Id.* at 8 (quoting V WRITINGS OF THOMAS JEFFERSON 113 (Ford ed., 1895)).

⁶⁴ See generally *Proceedings in Congress During the Years 1789 and 1790, Relating to the First Patent and Copyright Laws*, 22 J. PAT. OFF. SOC'Y 243 (1940) (compiling documents related to the first congressional proceedings).

⁶⁵ *Id.* at 259.

promotion of science and literature.⁶⁶

Washington approved and signed the Patent Act of 1790 three months later on April 10, 1790, creating the first American patent legislation.⁶⁷

The debate continued. Expressing a substantial change in thought from earlier letters to James Madison, Jefferson wrote to Oliver Evans in 1807 that “[c]ertainly an inventor ought to be allowed a right to the benefit of his invention for some certain time. . . . Nobody wishes more than I do that ingenuity should receive a liberal encouragement.”⁶⁸ In an 1813 letter to Isaac McPherson, Jefferson elaborated on his philosophy of patent monopolies.⁶⁹ He understood that people cannot naturally own a property right of exclusion in the ideas of their invention because, once made known to the public, information spreads freely from person to person.⁷⁰ Therefore, Jefferson concluded that patent monopolies are only born by society’s recognition that exclusive rights encourage the pursuit of useful ideas.⁷¹ With one issue rested, another arose: When does the benefit to the public justify “the embarrassment of an exclusive patent[?]”⁷² Offering one line of thought, Jefferson argued that patents should only be granted for ideas of relatively high utility.⁷³ These letters to Mr. Evans and Mr. McPherson came after Jefferson had experience as a member on the patent board and drafter of the 1793 Patent Act.⁷⁴

Despite the ongoing debates concerning patent policy, relatively minor changes were made to the Patent Act of 1790 until a substantial revision occurred with the Patent Act of 1870.⁷⁵ And although the current Patent Act of 1952 has been considered the second substantial revision,⁷⁶ the provisions concerning patent-eligible subject matter appear to have undergone only minor changes. The Patent Act of 1790 provided that “any person or persons . . . setting forth that he, she or they hath or have invented or discovered any useful art[s], manufacture[s], engine[s], machine[s], device[s], or any improvement[s] therein . . . [may be granted a patent].”⁷⁷ And where “art” has the same meaning as “process,”⁷⁸ the current Patent Act of 1952 provides little variation in its provision that “[w]hoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefore, subject to the conditions and requirements of this title.”⁷⁹

⁶⁶ *Id.* at 253–54.

⁶⁷ *Id.* at 276.

⁶⁸ *Graham*, 383 U.S. at 8 (quoting V WRITINGS OF THOMAS JEFFERSON 75–76 (Washington ed.)).

⁶⁹ *Id.* at 8–9 & n.2 (quoting VI WRITINGS OF THOMAS JEFFERSON 180–81 (Washington ed.)).

⁷⁰ *Id.* (quoting VI WRITINGS OF THOMAS JEFFERSON 180–81 (Washington ed.)).

⁷¹ *Id.* (quoting VI WRITINGS OF THOMAS JEFFERSON 180–81 (Washington ed.)).

⁷² *See id.* at 9.

⁷³ *Id.* at 9–10 & n.3 (quoting VI WRITINGS OF THOMAS JEFFERSON 180–81 (Washington ed.)).

⁷⁴ *Graham*, 383 U.S. at 9–10 (1966).

⁷⁵ S. REP. NO. 82-1979 (1952), reprinted in 1952 U.S.C.C.A.N. 2394, 2397.

⁷⁶ *Id.*

⁷⁷ Patent Act of 1790, ch. 7, 1 Stat. 109 (1790).

⁷⁸ 35 U.S.C. § 100 (2000).

⁷⁹ *Id.* § 101.

Under the Patent Act of 1952, modern American patent grants are recognized as property rights of exclusion.⁸⁰ Generally, a patent grant affords the patentee “the right to exclude others from making, using, selling, or offering to sell the patented invention in the United States, or importing the invention.”⁸¹ However, this right to exclude is for a limited term and generally lasts for seventeen to twenty years depending on particular dates of issue and application.⁸² Additionally, a patentee may license his or her patent to others.⁸³ If a party takes action in contradiction to any right held by a patentee, a constitutional injury has occurred,⁸⁴ and the injured patentee’s remedies may be for damages, costs, attorney fees,⁸⁵ and injunction.⁸⁶ However, the government has the power of eminent domain to deprive a patentee of his or her patent rights.⁸⁷ These general rights and remedies create the opportunity for a patentee to exercise a limited monopoly in order to obtain economic advantages.⁸⁸ The following case implicates currently held patent rights as well as potential patent rights as it raises a fundamental question not altogether clear from the current Patent Act of 1952 and relevant case law: What is capable of being patented?

III. FACTS

Bernard L. Bilski and Rand A. Warsaw (collectively, “Applicants”) filed a patent application entitled “Energy Risk Management Method” on April 10, 1997.⁸⁹ The application set out eleven claims, the first reading:

A method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising the steps of:

- (a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumer;
- (b) identifying market participants for said commodity having a counter-risk position to said consumers; and

⁸⁰ HARMON, *supra* note 60, §1.1(a) (“It is beyond reasonable debate that patents are property”). To be sure, the Patent and Copyright Clause affords the grant to inventors of an “exclusive Right to their . . . Discoveries[.]” U.S. CONST art. I, § 8, cl. 8, and the right to exclude is the hallmark of property. HARMON, *supra* note 60, §1.1(a).

⁸¹ HARMON, *supra* note 60, §1.1(a) (Supp. 2008).

⁸² *Id.* §1.1(a) (8th ed. 2007).

⁸³ *Id.*

⁸⁴ *Id.* §1.1(a) (Supp. 2008).

⁸⁵ *Id.* §1.1(a) n.25 (8th ed. 2007).

⁸⁶ *Id.*

⁸⁷ HARMON, *supra* note 60, §1.1(a).

⁸⁸ *Id.*

⁸⁹ *Ex parte Bilski*, No. 2002-2257, 2006 WL 5738364, n.1 (B.P.A.I. Sept. 26, 2006). The patent was filed exactly 207 years after President George Washington signed the 1790 Patent Act. *Proceedings in Congress During the Years 1789 and 1790, Relating to the First Patent and Copyright Laws*, 22 J. J. PAT. OFF. SOC’Y 243, 276 (1940).

(c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions.⁹⁰

Generally, this first claim describes a method for hedging risk associated with commodities trading.⁹¹ Claims two through eleven delimit the broad first claim.⁹² The particular consumption risk sought to be managed is weather-related price risk and the commodity involved is energy.⁹³ Moreover, the transactions involving commodities are not limited to sales and may also consist of options for the right to purchase the commodity at a fixed price during a defined timeframe.⁹⁴

The subject matter of the patent can be illustrated by an example of parties having different interests in coal.⁹⁵ Changes in the weather can change how much coal a power company will need for producing electricity based upon increases and decreases in the amount of power customers need for heating and air conditioning. If the demand and price of coal increases due to weather, the power company suffers while the coal mining company that supplies the coal benefits, and vice versa if the demand and price decrease.⁹⁶ Patent protection was claimed for the method of establishing an intermediary party who sells coal to the power company at one fixed price and buys coal from the mining company at a second fixed price.⁹⁷ Adverse, as well as beneficial, weather-related changes in coal prices for the power and mining companies are thereby eliminated and uncertainty is minimized.⁹⁸ Moreover, the commodity provider has hedged against uncertainty because increases in demand and price mean that it has sold coal at a disadvantageous price but has bought coal at an advantageous price, and vice versa if demand and price decrease.⁹⁹

Each of *Bilski* and *Warsaw*'s eleven claims were rejected under 35 U.S.C. § 101 by the patent examiner because "the invention is not implemented on a specific apparatus and merely manipulates [an] abstract idea and solves a purely mathematical problem without any limitation to a practical application, therefore, the invention is not directed to the technological arts."¹⁰⁰ The Applicants appealed and the Board of Patent Appeals and Interferences ("Board") found the examiner erred insofar as any technological arts or specific apparatus tests were applied.¹⁰¹ Applying a transformation test did not save the claims either because the Board

⁹⁰ *In re Bilski*, 545 F.3d 943, 950 (Fed. Cir. 2008) (en banc) (quoting '892 application cl.1), *cert. granted sub nom.* *Bilski v. Doll*, 129 S. Ct. 2735 (No. 08-964, 2009 Term).

⁹¹ *Id.*

⁹² *Ex parte Bilski*, 2006 WL 5738364.

⁹³ *Id.*

⁹⁴ *Bilski*, 545 F.3d at 950.

⁹⁵ *See id.* at 949–50.

⁹⁶ *Id.*

⁹⁷ *Id.* at 950.

⁹⁸ *See id.* at 949–50.

⁹⁹ *Id.* at 950.

¹⁰⁰ *In re Bilski*, 545 F.3d 943, 950 (Fed. Cir. 2008).

¹⁰¹ *Id.*

concluded that transforming non-physical financial risks was not a patent-eligible process.¹⁰² Moreover, the Board found the claims were not patent-eligible because they only claimed an abstract idea and did not satisfy the “useful, concrete and tangible result” test.¹⁰³

Bilski and Warsaw appealed to the United States Court of Appeals for the Federal Circuit (“Federal Circuit”).¹⁰⁴ Their argument that the examiner and the Board arrived at erroneous decisions regarding patent-eligibility under § 101 was originally presented before a Federal Circuit panel on October 1, 2007.¹⁰⁵ Before disposition, however, an en banc review was ordered and oral argument was again heard on May 8, 2008.¹⁰⁶ The Federal Circuit affirmed the conclusion that the Applicants’ claims were not patent-eligible.¹⁰⁷

IV. OPINION ANALYSIS

A. Majority Opinion

Chief Judge Michel wrote for the majority,¹⁰⁸ discussing the nettlesome issue of what is patent-eligible under § 101¹⁰⁹ – a threshold issue that determines when a patent may issue regardless of the possibility that all other conditions of patentability have been satisfied.¹¹⁰ However, a patent examiner is not required to address § 101 patent-eligibility before rejecting an application on other grounds.¹¹¹ Because there was no dispute upon the meaning of the claims, the court strictly focused on whether the claims were patent-eligible within the meaning of § 101.¹¹²

There was no dispute that the claimed invention sought protection as a “process” under § 101.¹¹³ The court noted that if it were not for intervening Supreme Court decisions, the claims at issue would meet the definition of “process” as was originally understood under the 1952 Patent Act.¹¹⁴ Specifically, the broad ordinary meaning of “process”—“[a] procedure, . . . [a] series of actions, motions, or operations definitely conducting to an end, whether voluntary or involuntary”—had been constricted.¹¹⁵

Various Supreme Court cases were discussed by the court as standing for the

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.* at 949.

¹⁰⁶ *In re Bilski*, 545 F.3d 943, 949 (Fed. Cir. 2008).

¹⁰⁷ *Id.*

¹⁰⁸ *Id.* The Chief Judge was joined by Circuit Judges Lourie, Schall, Bryson, Gajarsa, Linn, Dyk, and Prost. *Id.*

¹⁰⁹ *See id.* at 949–66.

¹¹⁰ *Id.* at 950–51.

¹¹¹ *Id.* at n.1.

¹¹² *In re Bilski*, 545 F.3d 943, 951 (Fed. Cir. 2008).

¹¹³ *Id.*

¹¹⁴ *See id.* at 951–52.

¹¹⁵ *See id.* (quoting WEBSTER’S NEW INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE 1972 (2d ed. 1952)).

rule that a patent applicant cannot claim a fundamental principle or mental process even if the claim can literally be understood as a process.¹¹⁶ The court specified that fundamental processes consist of laws of nature, natural phenomena, and abstract ideas.¹¹⁷ Processes that fit these categories are patent-ineligible because they are basic foundations of knowledge that must be free to all persons.¹¹⁸ Logically, determining when an applicant claims a fundamental principle or mental process is difficult because inventions must incorporate and rely on these foundations of human knowledge.¹¹⁹ The court turned to the Supreme Court cases of *Gottschalk v. Benson* and *Diamond v. Diehr* for guidance.¹²⁰

From *Benson*, the court considered significant the Supreme Court's analysis that where a patent applicant's claims cover all uses of an abstract idea, the practical effect of granting the patent would be an improper monopoly on the idea itself.¹²¹ Elaborating on this analysis, the court identified a critical distinction that was made in *Diehr*: Despite the fact that claims may incorporate or rely on a fundamental principle, a particular application of the fundamental principle would not be improper because such a patent would not operate to preempt all uses of the fundamental principle or mental process.¹²² The court thus concluded that whether a patent was improperly drawn to a fundamental principle was a matter of determining to what degree a patent applicant's claims would exclude others from a fundamental principle.¹²³ However, the court was not clear in explaining what degree of exclusion was improper¹²⁴ or whether mental processes should be examined under the same preemption analysis.¹²⁵

Despite any ambiguity in the preemption analysis, the court claimed that the Supreme Court had "enunciated a definitive test to determine whether a process claim is tailored narrowly enough to encompass only a particular application of a fundamental principle rather than to pre-empt the principle itself."¹²⁶ The court called this test the "machine-or-transformation test" and stated it as follows: "A claimed process is surely patent-eligible under § 101 if: (1) it is tied to a particular

¹¹⁶ *Id.* at 952 (citing *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127 (1948); *Gottschalk v. Benson*, 409 U.S. 63 (1972); *Parker v. Flook*, 437 U.S. 584 (1978); *Diamond v. Diehr*, 450 U.S. 175 (1981); *Le Roy v. Tatham*, 55 U.S. 156 (1852)).

¹¹⁷ *Id.* at 952 & n.4.

¹¹⁸ *In re Bilski*, 545 F.3d 943, 952 (Fed. Cir. 2008).

¹¹⁹ *See Diehr*, 450 U.S. at n.12 ("[A]ll inventions can be reduced to underlying principles of nature.").

¹²⁰ *Bilski*, 545 F.3d at 952–54.

¹²¹ *Id.* at 953–54.

¹²² *Id.* at 952–53.

¹²³ *Id.* at 953.

¹²⁴ *See id.* at 954 (stating the degree of exclusion to be either preemption of "substantially all uses of [a] fundamental principle" or preemption of "all uses of a fundamental principle").

¹²⁵ *See id.* at 952–54 (stating that "[t]he true issue before us then is whether Applicants are seeking to claim a fundamental principle (such as an abstract idea) or a mental process," but arriving at a modified notion that "[t]he question before us then is whether Applicants' claim recites a fundamental principle and, if so, whether it would pre-empt substantially all uses of that fundamental principle if allowed").

¹²⁶ *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008). The court noted that this test was "articulated in *Benson* and reaffirmed in *Diehr*." *Id.* at 955.

machine or apparatus, or (2) it transforms a particular article into a different state or thing.”¹²⁷ Under the machine branch of this test, the court rationalized that “[a] claimed process involving a fundamental principle that uses a particular machine or apparatus would not pre-empt uses of the principle that do not also use the specified machine or apparatus in the manner claimed.”¹²⁸ And under the transformation branch of this test, the court reasoned that:

[A] claimed process that transforms a particular article to a specified different state or thing by applying a fundamental principle would not pre-empt the use of the principle to transform any other article, to transform the same article but in a manner not covered by the claim, or to do anything other than transform the specified article.¹²⁹

Next, the court addressed the arguments from Applicants and various amici concerning whether the machine-or-transformation test was the sole test governing analysis of process patents under § 101.¹³⁰ The court conceded that in *Benson*—the first case of the Supreme Court’s trilogy discussing patent eligibility under § 101—the Court was equivocal in establishing any machine-or-transformation test.¹³¹ This fact is fairly odd because *Benson* unequivocally rejected the argument that a process patent must be either tied to a machine or transform an article.¹³² Further, the court recognized the statement in *Flook* that “we assume that a valid process patent may issue even if it does not meet [the machine-or-transformation test].”¹³³ The court apparently thought the assumptive nature of the statement was evidence of equivocalness rather than suspicion that such cases would be rare. Finally, the Court in *Diehr*, the last case of the trilogy, stated that “[t]ransformation and reduction of an article ‘to a different state or thing’ is the clue to the patentability of a process claim that does not include particular machines.”¹³⁴ Because this “clue” is similar to the machine-or-transformation test and there was no statement in *Diehr* that it was not the sole test of patent-eligibility for process patents under § 101, the court inferred that the machine-or-transformation test was rendered the sole test for such determinations.¹³⁵ In circular fashion, the court concluded that their reliance on “the Supreme Court’s machine-or-transformation test” was acceptable.¹³⁶

¹²⁷ *Id.* at 954.

¹²⁸ *Id.*

¹²⁹ *Id.*

¹³⁰ *Id.* at 955–56.

¹³¹ *Id.* at 956.

¹³² *Gottschalk v. Benson*, 409 U.S. 63 (1972).

It is argued that a process patent must either be tied to a particular machine or apparatus or must operate to change articles or materials to a ‘different state or thing.’ We do not hold that no process patent could ever qualify if it did not meet the requirements of our prior precedents.

Id.

¹³³ *Bilski*, 545 F.3d at 956 (alteration in original) (quoting *Parker v. Flook*, 437 U.S. 584, 589 (1978)).

¹³⁴ *Diamond v. Diehr*, 450 U.S. 175, 184 (1981) (quoting *Benson*, 409 U.S. at 70).

¹³⁵ *Bilski*, 545 F.3d at 956.

¹³⁶ *Id.* (“Therefore, we believe our reliance on the Supreme Court’s machine-or-transformation test

Two requirements of the machine-or-transformation test were then explained by the court.¹³⁷ First, *Diehr* stated that § 101 “cannot be circumvented by attempting to limit the use of the formula to a particular technological environment.”¹³⁸ This holding was interpreted to mandate that no potential process patent that merely claims a fundamental principle or mental process may become patentable by limiting its application to a particular field-of-use.¹³⁹ The court noted that this is not contrary to the aforementioned preemption analysis undergirding the machine-or-transformation test because “pre-emption is merely an indication that a claim seeks to cover a fundamental principle itself rather than only a specific application of that principle.”¹⁴⁰ Moreover, the court stated, “Pre-emption of all uses of a fundamental principle in all fields and pre-emption of all uses of the principle in only one field both indicate that the claim is not limited to a particular application of the principle.”¹⁴¹ It was summarily concluded that satisfying the machine-or-transformation test necessarily satisfies the requirement in *Diehr*.¹⁴²

Second, the court discussed *Diehr*'s statement that “insignificant post-solution activity will not transform an unpatentable principle into a patentable process.”¹⁴³ This finding built upon the idea in *Flook* that “[t]he notion that post-solution activity . . . can transform an unpatentable principle into a patentable process exalts form over substance.”¹⁴⁴ The Court in *Flook* provided an example: “A competent draftsman could attach some form of post-solution activity to almost any mathematical formula; the Pythagorean theorem would not have been patentable, or partially patentable, because a patent application contained a final step indicating that the formula, when solved, could be usefully applied to existing surveying techniques.”¹⁴⁵

Tension arises when it is remembered that fundamental principles and mental processes will exist in all patents to some degree.¹⁴⁶ Does this mean that significant post-solution activities may transform fundamental principles into a patentable process? If fundamental principles and mental processes are always patent-ineligible,¹⁴⁷ is the post-solution activity rule superfluous?

The court also discussed other considerations in an effort to clarify the limits of § 101.¹⁴⁸ First noted was the Supreme Court's holding in *Diehr* that § 101 does not require examination of whether an applicant's claims recite any new or obvious

as the applicable test for § 101 analyses of process claims is sound.”).

¹³⁷ *Id.* at 957.

¹³⁸ *Diehr*, 450 U.S. at 191.

¹³⁹ *Bilski*, 545 F.3d at 957.

¹⁴⁰ *Id.*

¹⁴¹ *Id.*

¹⁴² *Id.*

¹⁴³ *Id.* (quoting *Diehr*, 450 U.S. at 191–92).

¹⁴⁴ *Parker v. Flook*, 437 U.S. 584, 590 (1978).

¹⁴⁵ *Id.*

¹⁴⁶ See *supra* note 119 and accompanying text.

¹⁴⁷ See *supra* note 116 and accompanying text.

¹⁴⁸ See *Bilski*, 545 F.3d at 958.

subject matter because these statutory requirements are governed only by 35 U.S.C. §§ 102 and 103.¹⁴⁹ Second, the Court in *Diehr* explained that “under § 101, [an applicant’s] claims must be considered as a whole . . . [and] it is inappropriate to dissect the claims.”¹⁵⁰ *Diehr* recognized that “[t]his is particularly true in a process claim because a new combination of steps in a process may be patentable even though all the constituents of the combination [might be patent-ineligible].”¹⁵¹

In section III, the court reviewed its own prior cases and others from its predecessor, the United States Court of Customs and Patent Appeals, which followed the Supreme Court’s patent-eligibility cases.¹⁵² It was claimed that these decisions provided “a wealth of detailed guidance and helpful examples on how to determine the patent-eligibility of process claims” because they discussed technologies unimaginable at the time the Supreme Court decided its trilogy of patent-eligibility cases.¹⁵³ However, the court began by rejecting two § 101 tests promulgated by at least six prior decisions.¹⁵⁴

Three cases from the Court of Customs and Patent Appeals—*In re Freeman*, *In re Walter*, and *In re Abele*—developed the now-defunct *Freeman-Walter-Abele* test.¹⁵⁵ The court stated the two-step test as follows: “(1) determining whether the claim recites an ‘algorithm’ within the meaning of *Benson*, then (2) determining whether that algorithm is ‘applied in any manner to physical elements or process steps.’”¹⁵⁶ After noting a possible argument that the test may conflict with the holistic claim construction rule,¹⁵⁷ the court invalidated the test.¹⁵⁸

Another three cases—*In re Alappat*, *State Street Bank & Trust Co. v. Signature Financial Group Inc.*, and *AT&T Corp. v. Excel Communications, Inc.*—stood for the “useful, concrete and tangible result” inquiry.¹⁵⁹ The court noted that this test was related to the machine-or-transformation test, but it “was certainly never intended to supplant the Supreme Court’s test.”¹⁶⁰ As a result, the test was invalidated.¹⁶¹

¹⁴⁹ *Id.* (quoting *Diamond v. Diehr*, 450 U.S. 175, 188–91 (1981)).

¹⁵⁰ *Diehr*, 450 U.S. at 188.

¹⁵¹ *Id.* Therefore, post-solution activity must be analyzed with regard to all claims made by a patent applicant rather than any individual post-solution step. *See supra* text accompanying notes 143–46.

¹⁵² *Bilski*, 545 F.3d at 958.

¹⁵³ *Id.*

¹⁵⁴ *Id.* at 958–60.

¹⁵⁵ *Id.* at 958–59 (citing *In re Freeman*, 573 F.2d 1237 (C.C.P.A. 1978); *In re Walter*, 618 F.2d 758 (C.C.P.A. 1980); *In re Abele*, 684 F.2d 902 (C.C.P.A. 1982)).

¹⁵⁶ *Id.* at 959 (citing *In re Abele*, 684 F.2d at 905–07).

¹⁵⁷ *See supra* notes 150–51 and accompanying text. The court also cited *In re Grams* for the proposition a claim might be patent-eligible despite the *Freeman-Walter-Abele* test. *In re Bilski*, 545 F.3d at 959 (citing *In re Grams*, 888 F.2d 835, 838–39 (Fed. Cir. 1989)). However, the court later acknowledged *In re Grams*’s reliance on the *Freeman-Walter-Abele* test. *Id.* at n.17.

¹⁵⁸ *Bilski*, 545 F.3d at 959.

¹⁵⁹ *Id.* (citing *In re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994); *State St. Bank & Trust Co. v. Signature Fin. Group Inc.*, 149 F.3d 1368 (Fed. Cir. 1998); *AT&T Corp. v. Excel Commc’ns, Inc.*, 172 F.3d 1352 (Fed. Cir. 1999)).

¹⁶⁰ *Id.*

¹⁶¹ *Id.* at 959–60.

Without citing any specific decisions, the court then addressed a call from some *amici curiae* to adopt a technological arts test.¹⁶² Such a test would require claims drafted to some sort of technological art.¹⁶³ The court stated that a technological arts test would be inherently vague because “the terms ‘technological arts’ and ‘technology’ are both ambiguous and ever-changing.”¹⁶⁴ Ultimately, this type of test was not adopted by the court because a technological arts test had never before been explicitly adopted by the court, its predecessor, or the Supreme Court.¹⁶⁵

Supporting one aspect of *State Street*, the court reaffirmed its decision not to create any categorical exclusion beyond fundamental principles.¹⁶⁶ Under *State Street*, the court rejected the categorical exclusion of business methods from § 101 eligibility because business methods are “subject to the same legal requirements for patentability as applied to any other process or method.”¹⁶⁷ Moreover, the court declined to create a categorical exclusion regarding computer software.¹⁶⁸

After sorting out the above issues, the court reexamined the facts of prior cases in order to elaborate on the machine-or-transformation test.¹⁶⁹ However, the court first restricted its discussion with an eye toward the facts presently before it.¹⁷⁰ This approach focused solely on the transformation branch of the machine-or-transformation test because the Applicants had admitted their first claim did not tie any step of their process to a machine or apparatus.¹⁷¹ Therefore, the question of § 101 patent eligibility was first narrowed to whether the central purpose of the claimed process was to transform an article into a different state or thing.¹⁷²

Looking to *Benson*, the court honed in on the Supreme Court’s statement that “chemical process[es] or the physical acts which transform . . . raw material are . . . sufficiently definite to confine the patent monopoly within rather definite bounds.”¹⁷³ This proposition first meant that the transformation of an article must give the patentee’s monopoly “meaningful limits.”¹⁷⁴ Next, it classified physical objects or substances as “articles,” which may be the focus of a patent eligible

¹⁶² *Id.* at 960.

¹⁶³ *Id.* at n.21.

¹⁶⁴ *In re Bilski*, 545 F.3d 943, 960 (Fed. Cir. 2008).

¹⁶⁵ *Id.*

¹⁶⁶ *Id.*

¹⁶⁷ *State St. Bank & Trust Co. v. Signature Fin. Group Inc.*, 149 F.3d 1368, 1375–76 (Fed. Cir. 1998), *abrogated in part by Bilski*, 545 F.3d 943.

¹⁶⁸ *Bilski*, 545 F.3d at 960, n.23. The court noted that it would not be helpful to discuss computer software patent-eligibility because the facts before the court involved no computer software. *Id.*

¹⁶⁹ *Id.* at 961.

¹⁷⁰ *Id.* at 962.

¹⁷¹ *Id.* This is a somewhat odd analysis because the court had recognized the impropriety of dissecting an applicant’s claims when applying a § 101 analysis. *See supra* notes 150–51 and accompanying text. However, the court already noted this was not a case of claim construction, and the patent examiner found that none of the Applicants’ claims were tied to an apparatus. *See supra* notes 100, 112 and accompanying text.

¹⁷² *Bilski*, 545 F.3d at 962.

¹⁷³ *Id.* (citing *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972)).

¹⁷⁴ *Id.* at 961.

physical or chemical transformation.¹⁷⁵ The critical issue of the transformation test thus became “what sorts of things constitute ‘articles’ such that their transformation is sufficient to impart patent-eligibility under § 101.”¹⁷⁶

Arriving at an issue sure to become paramount, the Federal Circuit confronted whether “articles” could be electronic signals, electronic data, legal obligations, organizational relationships, or business risks.¹⁷⁷ The court found that a broadly stated process of visually displaying data would be patent-ineligible, but a process transforming data about a specific physical object or substance into a visual display could be patent-eligible.¹⁷⁸ Moreover, the underlying physical object or substance need not be transformed “[s]o long as the claimed process is limited to a practical application of a fundamental principle to transform specific data, and . . . there is no danger that the scope of the claim would wholly pre-empt all uses of the principle.”¹⁷⁹ However, the court found that mere data gathering usually will not transform any article and the mere addition of a data gathering step cannot transform an algorithm into a patent-eligible process.¹⁸⁰ The court was less than clear when it stated that “the inherent step of gathering data can also fairly be characterized as insignificant extra-solution activity” because it is incongruous to identify an *inherent* step of a process as an activity that is *insignificant* or *extra-solution*.¹⁸¹

In section IV, the majority applied the machine or transformation test to the facts of the case.¹⁸² Expounding further on the metes and bounds of patent-eligible process claims, the court held that transformations of “public or private legal obligations or relationships, business risks, or other such abstractions” cannot satisfy the machine-or-transformation test because “they are not physical objects or substances, and they are not representative of physical objects or substances.”¹⁸³ The court explained that *Bilski* and *Warsaw*’s process of trading commodities was merely an exchange of legal rights that could only amount to abstract mental and mathematical processes.¹⁸⁴ And even if the trading was limited to the specific process of hedging consumable commodities, the effective pre-emption of such a fundamental concept would at least require the impermissible pre-emption of an entire field-of-use.¹⁸⁵ Therefore, the process was not statutory subject matter because it failed to meet the machine-or-transformation test and the BPAI was accordingly affirmed.¹⁸⁶

¹⁷⁵ *Id.* at 962.

¹⁷⁶ *Id.*

¹⁷⁷ *Id.* at 962.

¹⁷⁸ *In re Bilski*, 545 F.3d 943, 962–63 (Fed. Cir. 2008).

¹⁷⁹ *Id.* at 963.

¹⁸⁰ *Id.*

¹⁸¹ *Id.*

¹⁸² *Id.*

¹⁸³ *Id.* at 963–64.

¹⁸⁴ *In re Bilski*, 545 F.3d 943, 964–65 (Fed. Cir. 2008).

¹⁸⁵ *Id.* at 966.

¹⁸⁶ *Id.* at 964–66.

B. Mayer Dissent

Judge Mayer dissented from the majority's failure to overrule *State Street Bank & Trust Co. v. Signature Financial Group, Inc.* and *AT&T Corp. v. Excel Communications, Inc.* on the ground that business methods should be categorically excluded from the scope of patent-eligible subject matter.¹⁸⁷ First, Judge Mayer argued that history likely lent no support to the constitutionality of business method patents because the Framers were familiar with the English Statute of Monopolies that restricted the Crown's ability to grant "monopolies to court favorites in goods or businesses *which had long before been enjoyed by the public*,"¹⁸⁸ and therefore "consciously acted to bar Congress from granting letters patent in *particular types* of business."¹⁸⁹ Key to Judge Mayer's constitutional argument is that the term "useful arts" in Article I, Section 8 equates to the modern term "technology" and that Congress does not have the power to allow patents for business methods because these methods "are not directed to any technological or scientific innovation."¹⁹⁰ Moreover, Judge Mayer argued that when the current 1952 Patent Act was enacted Congress intended to promote the case law that stood for the proposition that business methods are ineligible for patent protection.¹⁹¹ After reviewing the possible evils of business method patents,¹⁹² Judge Mayer concluded that the majority's machine-or-transformation test was an insufficient method for determining patent-eligibility and asserted a technological arts test asking whether claims are drawn to the natural sciences.¹⁹³

C. Rader Dissent

Judge Rader dissented because the majority "link[ed] patent eligibility to the age of iron and steel at a time of subatomic particles and terabytes."¹⁹⁴ Specifically, Judge Rader's opinion regarded the machine-or-transformation test as an amalgamation of Supreme Court dicta¹⁹⁵ that raised more problems than it solved¹⁹⁶ and hindered innovation in increasingly ethereal technologies.¹⁹⁷ For these reasons, Judge Rader concluded that the Patent Act sets a broad standard for statutory subject matter under § 101¹⁹⁸ and the present claims were patent-ineligible because they sought to monopolize an abstract idea.¹⁹⁹

¹⁸⁷ *Id.* at 998 (Mayer, J., dissenting).

¹⁸⁸ *Id.* (emphasis added) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 5 (1966)).

¹⁸⁹ *Id.* (emphasis added) (citing *In re Comiskey*, 499 F.3d 1365, 1375 (Fed. Cir. 2007)).

¹⁹⁰ *In re Bilski*, 545 F.3d 943, 1001 (Fed. Cir. 2008).

¹⁹¹ *Id.* at 999–1000.

¹⁹² *Id.* at 1004–08 (Mayer, J., dissenting).

¹⁹³ *Id.* at 1008–11.

¹⁹⁴ *Id.* at 1011 (Rader, J., dissenting).

¹⁹⁵ *Id.*

¹⁹⁶ *In re Bilski*, 545 F.3d 943, 1015 (Fed. Cir. 2008) (Rader, J., dissenting).

¹⁹⁷ *Id.*

¹⁹⁸ *Id.* at 1012.

¹⁹⁹ *Id.* at 1011.

D. Newman Dissent

Judge Newman decried the majority for contravening the Patent Act,²⁰⁰ contravening precedent,²⁰¹ and contravening the Constitution.²⁰² Further, Judge Newman reasoned that neither the early English Statute of Monopolies²⁰³ nor the English common law²⁰⁴ limited the § 101 term “process” in the manner the majority reasoned.²⁰⁵ After recognizing that the Patent Act contains other provisions regarding novelty, obviousness, and specification that could more properly preclude or permit a patent for Bilski’s claimed invention, Judge Newman concluded that the majority had improperly created an unpredictable standard that cast present and future patent rights into doubt and undermined the policy of spurring innovation.²⁰⁶

E. Dyk & Linn Concurrence

The concurring opinion joined fully with the majority opinion and wrote separately to rebut the assertion in the dissents from Judges Rader and Newman that the majority had “usurp[ed] the legislative role” by straying from the scope of patent-eligibility under § 101.²⁰⁷ Analyzing the legislative history of the current patent act, the concurring judges ascribed various principles from the English Statute of Monopolies and English case law to the first couple American Patent Acts.²⁰⁸ The concurring opinion concluded that early American patent law did not support claims for “organizing human activity” such as Bilski and Warsaw’s claims and that there has been no intervening change that would render these claims patent-eligible.²⁰⁹

V. IMPACT

A. Direct Impact

1. Post-Bilski Federal Circuit Decisions

By January 1, 2010, four Federal Circuit decisions relying on *Bilski* had issued. In *Classen Immunotherapies, Inc. v. Biogen Idec*, the court exemplified three patent-ineligible biotechnology claims, one covering natural phenomena and the other two covering insignificant post-solution activity.²¹⁰ Next, the Federal

²⁰⁰ *Id.* at 976 (Newman, J., dissenting).

²⁰¹ *Id.*

²⁰² *In re Bilski*, 545 F.3d 943, 976 (Fed. Cir. 2008) (Newman, J., dissenting).

²⁰³ *Id.* at 985.

²⁰⁴ *Id.*

²⁰⁵ *Id.*

²⁰⁶ *Id.* at 995–98 (citing 35 U.S.C. §§ 101–103, 112).

²⁰⁷ *Id.* at 966 (Dyk & Linn, JJ., concurring).

²⁰⁸ *In re Bilski*, 545 F.3d 943, 966–72 (Fed. Cir. 2008) (Dyk & Linn, JJ., concurring).

²⁰⁹ *Id.* at 972–76.

²¹⁰ Nos. 2006-1634, 2006-1649, 2008 WL 5273107 (Fed. Cir. Dec. 19, 2008).

Circuit differentiated between business method claims that are patent-ineligible for reciting mere mental processes and business method claims involving computers that come closer to passing the machine prong of the machine-or-transformation test in *In re Comiskey*.²¹¹ Defining abstract ideas under § 101, the court, in *In re Ferguson*, found claims related to a marketing business method to be patent-ineligible.²¹² Lastly, the Federal Circuit found biotechnology-related claims patent-eligible for their transformative nature despite close ties to patent-ineligible mental processes in *Prometheus Laboratories, Inc. v. Mayo Collaborative Services*.²¹³

The non-precedential Federal Circuit opinion *Classen Immunotherapies, Inc. v. Biogen Idec* summarily affirmed the invalidation of multiple biotechnology patents because they neither tied a process to a machine nor transformed a specific article into a different state or thing.²¹⁴ The lower court described three of Classen's patents at issue as "methods for evaluating and improving the safety of immunization schedules."²¹⁵ Each of the patents was held by the lower court to claim patent-ineligible subject matter for claiming a natural phenomenon described as "an inquiry of the extent of the proposed correlation between vaccines and chronic disorders."²¹⁶ Moreover, two of the patents included a step of immunizing patients pursuant to a low-risk schedule, which was held to be insignificant post-solution activity.²¹⁷

Vacating its previous 2007 decision decided upon obviousness principles under 35 U.S.C. § 103²¹⁸ and issuing, over dissent, a revised version decided upon wholly new § 101 grounds,²¹⁹ the Federal Circuit in *In re Comiskey* held multiple claims patent-ineligible and remanded other claims to the United States Patent and Trademark Office ("PTO").²²⁰ The first group of claims discussed by the court described a method for resolving unilateral and contractual document disputes through mandatory arbitration.²²¹ These claims were found patent-ineligible because they were drawn to mental processes and sought to monopolize human intelligence itself.²²² However, the second group of claims discussed by the court recited an arbitration module, arbitration system, and arbitration database.²²³ This

²¹¹ No. 2006-1286, 2009 WL 162408 (Fed. Cir. Jan. 26, 2009).

²¹² 558 F.3d 1359 (Fed. Cir. 2009).

²¹³ 581 F.3d 1336 (Fed. Cir. 2009).

²¹⁴ *Classen*, 2008 WL 5273107, at *1.

²¹⁵ *Classen Immunotherapies, Inc. v. Biogen Idec*, No. WDQ-04-2607, 2006 WL 6161856, at *1 (D. Md. Aug. 16, 2006).

²¹⁶ *Id.* at *5.

²¹⁷ *Id.*

²¹⁸ *In re Comiskey*, 499 F. 3d 1365 (Fed. Cir. 2007).

²¹⁹ Order on Petition for Rehearing En Banc, *In re Comiskey*, No. 2006-1286, 2009 U.S. App. Lexis 400, at *1-2 (Fed. Cir. Jan. 13, 2009).

²²⁰ *In re Comiskey*, No. 2006-1286, 2009 WL 162408, at *11 (Fed. Cir. Jan. 26, 2009).

²²¹ *Id.* at *10.

²²² *Id.* The court noted that the applicant had conceded that these claims neither required a machine nor described a process of manufacture or process to alter the composition of matter, closely tracking the machine-or-transformation test. *Id.*

²²³ *Id.*

second group of claims was limited “wherein access to the mandatory arbitration is established through the Internet, intranet, World Wide Web, software applications, telephone, television, cable, video [or radio], magnetic, electronic communication, or other communications means.”²²⁴ Finding that this second group of claims could, under the broadest reasonable interpretation, require the use of a machine, the Federal Circuit remanded to the PTO to consider whether the second group of claims recited statutory subject matter under § 101.²²⁵

In *In re Ferguson*, the Federal Circuit held claims reciting a method relating to a collective marketing regimen for computer software companies patent-ineligible.²²⁶ While the method claims were tied to a “marketing force,” the court concluded that the claims still failed the machine prong of the machine-or-transformation test because no “concrete thing, consisting of parts, or of certain devices and combination of devices” existed.²²⁷ Those claims, the court found, also failed the transformation prong because they merely organized business or legal relationships.²²⁸ Other “paradigm claims” were similarly held patent-ineligible for failure to fit within any one of the four § 101 categories.²²⁹ Circuit Judge Newman filed a concurring opinion stating that the majority improperly expanded upon *Bilski* by defining abstract ideas as anything that does not meet the machine-or-transformation test.²³⁰

Providing contrast to *Classen*, the Federal Circuit unanimously reversed an invalidation of biotechnology patents in *Prometheus Laboratories, Inc. v. Mayo Collaborative Services*.²³¹ The two patents at issue concerned two different autoimmune disease drugs to be used within similar methods of calculating dosages for optimal therapeutic efficacy.²³² While the lower court found these patents invalid for claiming “natural correlations and data-gathering steps,” the Federal Circuit explained that “methods of treatment . . . are always transformative when a defined group of drugs is administered to the body to ameliorate the effects of an undesired condition.”²³³ Regardless of whether the above explanation was meant as a per se rule under the transformation prong, the Federal Circuit advanced the following grounds for finding patent-eligibility: (1) the patents recited transformative claims because the diagnostic processes required both the transformation of drugs into metabolites within the human body and the transformation of human tissue samples into non-human samples;²³⁴ (2) the

²²⁴ *Id.*

²²⁵ *Id.* at *11.

²²⁶ 558 F.3d 1359, 1361 (Fed. Cir. 2009).

²²⁷ *Id.* at 1363–64 (quoting *In re Nuijten*, 500 F.3d 1346 (Fed. Cir. 2007)).

²²⁸ *Id.* at 1364.

²²⁹ *Id.* at 1365–66.

²³⁰ *Id.* at 1366–68 (Newman, J., concurring).

²³¹ *Prometheus Labs., Inc. v. Mayo Collaborative Servs.*, 581 F.3d 1336, 1339 (Fed. Cir. 2009). It should be remembered that while viewing *Prometheus* alongside *Classen* may provide contrast of certain concepts, *Classen* remains a non-precedential opinion. See *supra* note 214 and accompanying text.

²³² *Prometheus Labs.*, 581 F.3d at 1339–40.

²³³ *Id.* at 1346.

²³⁴ *Id.* at 1345–47.

patents' data gathering steps were neither "mere data-gathering" steps nor "insignificant extra-solution activity" because those steps were central to the purpose of medical diagnosis;²³⁵ and (3) the patents' final mental step of producing a particular medical warning was innocuous because "[a] subsequent mental step does not, by itself, negate the transformative nature of prior steps."²³⁶

2. *Petition for Writ of Certiorari*

On January 28, 2009, a petition for certiorari was filed on behalf of petitioners Bernard L. Bilski and Rand A. Warsaw.²³⁷ The first question presented to the Court reads:

Whether the Federal Circuit erred by holding that a "process" must be tied to a particular machine or apparatus, or transform a particular article into a different state or thing ("machine-or-transformation" test), to be eligible for patenting under § 101, despite this Court's precedent declining to limit the broad statutory grant of patent eligibility for "any" new and useful process beyond excluding patents for "laws of nature, physical phenomena, and abstract ideas."²³⁸

The second question reads: "Whether the Federal Circuit's 'machine-or-transformation' test for patent eligibility, which effectively forecloses meaningful patent protection to many business methods, contradicts the clear Congressional intent that patents protect 'method[s] of doing or conducting business.'"²³⁹ Certiorari was granted on June 1, 2009.²⁴⁰

3. *Supreme Court Briefs*

a. Brief for Petitioners

The Brief for Petitioners can be reasonably broken down into four main arguments.²⁴¹ Within the first main argument, petitioners asserted that the machine-or-transformation test conflicts with statutory and case authority establishing that the scope of § 101 is broad.²⁴² The second main argument proposed that the Patent Act recognizes the patent-eligibility of business methods within 35 U.S.C. § 273.²⁴³ Third, petitioners argued that the Court should recognize a practical application test for patents involving fundamental principles.²⁴⁴ Lastly, petitioners' fourth argument alleged that Bilski's claims at

²³⁵ *Id.* at 1343, 1347–48.

²³⁶ *Id.* at 1348–50.

²³⁷ Petition for Writ of Certiorari, *Bilski v. Doll*, No. 08-964, 2009 WL 226501 (U.S. filed Jan. 28, 2009).

²³⁸ *Id.* at *i.

²³⁹ *Id.*

²⁴⁰ *Bilski v. Doll*, 129 S. Ct. 2735 (2009).

²⁴¹ See Brief for Petitioners at iii–vi, *Bilski v. Doll*, No. 08-964, 2009 WL 2372921 (U.S. filed July 30, 2009).

²⁴² See *id.*

²⁴³ See *id.*

²⁴⁴ See *id.*

issue are patent-eligible when analyzed under the averred proper framework for § 101 process inventions.²⁴⁵

While partly enabling the ultimate conclusion of patent-eligibility, petitioners' first main argument that § 101 is more broad in scope than the machine-or-transformation test permits is also critical for understanding how the legal system should promote the policies underlying the Patent Act.²⁴⁶ Petitioners began by identifying statutory support in the expansive words of § 101 that “*any* new and useful process” is patent-eligible²⁴⁷ in order to foster human innovations.²⁴⁸ Juxtaposing the words of the statute with steadfast Supreme Court support for an expansive reading of the statute²⁴⁹ enabled petitioners to argue that the Federal Circuit has not only flouted two express denials of the machine-or-transformation test,²⁵⁰ but has also intruded into the ambit of the legislature.²⁵¹ Corollary to the above, petitioners noted that the rigid and limiting qualities of the machine-or-transformation test disrupt inventors' settled expectations of what is patent-eligible²⁵² and disrupt how other sections of the Patent Act were meant to operate within the statutory scheme.²⁵³

²⁴⁵ See *id.*

²⁴⁶ See *id.* at 18–28, 37–42.

²⁴⁷ Brief for Petitioners, *supra* note 241, at 18–19, 26–28 (emphasis added) (quoting 35 U.S.C. § 101). “[T]he Court has also been informed by congressional intent that statutory subject matter ‘include[s] anything under the sun that is made by man.’” *Id.* at 19 (quoting S. Rep. No. 82-1979, at 5 (1952), *reprinted in* 1952 U.S.C.C.A.N. 2394, 2399; H.R. Rep. No. 82-1923, at 6 (1952)).

²⁴⁸ *Id.* at 26–28 (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 316 (1980) (“Congress employed broad general language in drafting § 101 precisely because . . . inventions are often unforeseeable.”)).

²⁴⁹ *Id.* at 19–20 (citing *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int’l, Inc.*, 534 U.S. 124, 130 (2001) (“As this Court recognized over 20 years ago in *Chakrabarty*, the language of § 101 is extremely broad.”); *Chakrabarty*, 447 U.S. at 308 (“Congress plainly contemplated that the patent laws would be given wide scope.”)).

²⁵⁰ *Id.* at 20–21 (quoting *Gottschalk v. Benson*, 409 U.S. 63, 71 (1971):

It is argued that a process patent must either be tied to a particular machine or apparatus or must operate to change articles or materials to a ‘different state or thing.’ We do not hold that no process patent could ever qualify if it did not meet the requirements of our prior precedents.;

Parker v. Flook, 437 U.S. 584, 588 n.9 (1978)

The statutory definition of ‘process’ is broad. An argument can be made, however, that this Court has only recognized a process as within the statutory definition when it either was tied to a particular apparatus or operated to change materials to a ‘different state or thing.’ As in *Benson*, we assume that a valid process patent may issue even if it does not meet one of these qualifications of our earlier precedents. (citations omitted)).

²⁵¹ *Id.* at 37–42 (quoting *Expanded Metal Co. v. Bradford*, 214 U.S. 366, 382 (1909) (“[T]he statute . . . secures to inventors the right of protection; and it is not the province of the courts to so limit the statute as to deprive meritorious inventors of its benefits.”); *Chakrabarty*, 447 U.S. at 318 (“Congress is free to amend § 101 . . . [b]ut, until Congress takes such action, this Court must construe the language of § 101 as it is.”)).

²⁵² *Id.* at 39–40 (quoting *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 739 (2002) (“Fundamental alterations in these rules risk destroying the legitimate expectations of inventors in their property.”)).

²⁵³ Brief for Petitioners, *supra* note 241, at 40–42 (arguing that certain criticisms of business method patents illustrate problems applying rules of novelty, obviousness, and specification rather than § 101) (citing 35 U.S.C. §§ 101–103, 112). For example, petitioners note prior disconcertion from the Court that patents for business methods could be overly vague, *e.g.*, *eBay Inc. v. MercExchange, LLC*,

Moreover, petitioners pointed out that not only is § 101 broad, but also that business methods are expressly recognized in § 273.²⁵⁴ Within § 273, Congress crafted a defense to actions alleging the infringement of patents for methods where “method” is defined as a “method of doing or conducting business.”²⁵⁵ Therefore, petitioners argued that because the Federal Circuit’s machine-or-transformation test has been interpreted as a threat to existing business method patents,²⁵⁶ then § 273 would be improperly rendered superfluous as a defense without any concomitant threat²⁵⁷ and thereby inharmonious relative to § 101²⁵⁸ if the machine-or-transformation test is allowed to stand.²⁵⁹

Instead of the machine-or-transformation test, petitioners posited that the proper § 101 test announced by the Court must be the practical application test.²⁶⁰ The practical application test states that although abstract ideas, laws of nature, and natural phenomena are not within the limits of § 101, a practical application of those principles would be.²⁶¹ This position is supported with Supreme Court precedent dating back some 150 years,²⁶² and continued into the present.²⁶³

547 U.S. 388, 397 (2006) (Kennedy, J., concurring), and argue that this problem should not be remedied with the broad-scoped § 101, but is best dealt with under the statutory provisions regarding patent specifications, which require “a written description of the invention, and of the manner and process of making and using it, in . . . full, clear, concise, and exact terms,” under 35 U.S.C. § 112.

²⁵⁴ Brief for Petitioners, *supra* note 241, at 29–37.

²⁵⁵ *Id.* at 29 (citing 35 U.S.C. § 273).

²⁵⁶ *Id.* at 33–34 (quoting *CyberSource Corp. v. Retail Decisions, Inc.*, 620 F. Supp. 2d 1068, 1081 & n.16 (N.D. Cal. 2009))

Although the majority declined [to] say so explicitly, *Bilski*’s holding suggests a perilous future for most business method patents. . . . The closing bell may be ringing for business method patents, and their patentees may find they have become . . . [just like] shareholder[s] left holding shares of worthless stocks.)

²⁵⁷ *Id.* at 34 (“Under the mandatory application of the machine-or-transformation test, § 273 would provide a meaningless defense to the infringement of a class of patents that cannot exist.”).

²⁵⁸ *Id.* at 29 (quoting *FTC v. Mandel Bros., Inc.*, 359 U.S. 385, 389 (1959) (“[I]f possible, all parts [of a statute should fit] into a[] harmonious whole.”); *Davis v. Mich. Dept. of Treasury*, 489 U.S. 803, 809 (1989) (“It is a fundamental canon of statutory construction that the words of a statute must be read in their context and with a view to their place in the overall statutory scheme.”)). Further, petitioners analogized harmonizing §§ 101 and 273 with how the Court had previously rationalized the patent-eligibility of plant patents under § 101 by reference to 35 U.S.C. § 119. *Id.* at 34–37 (citing *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int’l, Inc.*, 534 U.S. 124 (2001)).

²⁵⁹ *Id.* at 34 (“That cannot be what Congress intended, and the Federal Circuit’s failure to address this conflict between its decision and the clear legislative intent expressed through the adoption of § 273 warrants reversal.”).

²⁶⁰ Brief for Petitioners, *supra* note 241, at 42–52.

²⁶¹ *Id.* at 42.

²⁶² *Id.* at 43–46 (quoting *O’Reilly v. Morse*, 15 How. (56 U.S.) 62, 119 (1854))

Whoever discovers that a certain useful result will be produced, in any art, machine, manufacture, or composition of matter, by the use of certain means, is entitled to a patent for it. . . . It makes no difference . . . whether the effect is produced by chemical agency or combination; or by the application of discoveries or principles in natural philosophy known or unknown before his invention; or by machinery acting altogether upon mechanical principles.)

²⁶³ *Id.* (citing *Tilghman v. Proctor*, 102 U.S. 707 (1880); *The Telephone Cases*, 126 U.S. 1 (1888); *New Process Fermentation Co. v. Maus*, 122 U.S. 413 (1887); *Mackay Radio & Tel. Co. v. Radio Corp. of Am.*, 306 U.S. 86 (1939); *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127 (1948); *Diamond v. Chakrabarty*, 447 U.S. 303 (1980); *Diamond v. Diehr*, 450 U.S. 175 (1981)). Petitioners also asserted that the Federal Circuit has followed the practical application standard. *Id.* at 53 (citing *In re*

Moreover, petitioners differentiated the evolution of the American patent system rather than paralleling it with English patent law, specifying that the English system began as a means to promote manufacturing industry while the American patent system markedly broke from that practice by allowing patents for a wide variety of human discoveries.²⁶⁴

Under the practical application test, petitioners alleged the Bilski patent to be patent-eligible under § 101.²⁶⁵ First, petitioners asserted that all the patent claims fall within the § 101 category of processes because they describe a method for hedging financial risk associated with commodities transactions.²⁶⁶ Petitioners then argued that the process of hedging is not an impermissible abstract idea because, rather than merely attempting to patent the abstract business concept of hedging, the claimed method is particularized with regard to the parties involved in the commodities trading and with regard to the weather-oriented aspect of the trading.²⁶⁷ Finally, the patent arguably satisfied § 101 strictures because the described mathematical formula itself was not claimed, but the formula was put to practical application to determine a certain price within the useful process of hedging financial risk through weather-related commodities trading.²⁶⁸

b. Brief for the Respondent

The Brief for the Respondent is broken into three main arguments.²⁶⁹ Respondent began by asserting that only industrial and technological processes, not methods of organizing human activity, fall within the protection § 101 offers.²⁷⁰ Next, the respondent argued that the scope of § 101 is not expanded by § 273.²⁷¹ Hinged upon the preceding arguments, respondent lastly noted that the Federal Circuit correctly denied statutory eligibility for the Bilski patent under § 101.²⁷²

While respondent's first main argument presented a mode of § 101 analysis parallel to that found in the Federal Circuit's en banc opinion, respondent treaded further in countering a variety of petitioners' arguments.²⁷³ In order to support congressional intent that § 101 is broad without encompassing methods of organizing human activity, respondent pointed to the plain statutory text and argued with support from Supreme Court precedent,²⁷⁴ support from historical

Alappat, 33 F.3d 1526 (Fed. Cir. 1994) (en banc); *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998); *AT&T Corp. v. Excel Commc'ns, Inc.*, 172 F.3d 1352 (Fed. Cir. 1999)).

²⁶⁴ *Id.* at 47–52.

²⁶⁵ *Id.* at 52–59.

²⁶⁶ Brief for Petitioners, *supra* note 241, at 55–56.

²⁶⁷ *Id.* at 57–58.

²⁶⁸ *Id.* at 58–59.

²⁶⁹ Brief for the Respondent at III–IV, *Bilski v. Kappos*, No. 08-964, 2009 WL 3070864 (U.S. filed Sept. 25, 2009).

²⁷⁰ *Id.* at 11–46.

²⁷¹ *Id.* at 46–51.

²⁷² *Id.* at 51–55.

²⁷³ *See id.* at 11–46.

²⁷⁴ *Id.* at 11–15 (citing *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 483 (1974); *Lab. Corp. of*

definition,²⁷⁵ and support from English patent law.²⁷⁶ Generally countering petitioners' arguments, respondent presented the following: (1) that the congressional scope of "anything under the sun that is made by man" only includes machines and manufactures;²⁷⁷ (2) that "[t]he machine-or-transformation test accommodates evolving technology" rather than stalling modern advancements;²⁷⁸ and (3) that the § 101 rubric advanced by petitioners cannot be proper.²⁷⁹

Regarding petitioners' § 273 argument, the respondent characterized petitioners' analysis as improper, conceding that while § 273 prevents actions for infringement of business methods, that provision does not protect methods for organizing human activity.²⁸⁰ Respondent asserted that § 273 protects against business method infringement suits relating to business methods arising out of any of the four subject matter categories within § 101.²⁸¹ Moreover, respondent contended that petitioners' analogy to a similar plant patent-eligibility issue was misplaced because the PTO has historically sought judicial approval regarding how to treat process patents unlike the inferred congressional approval for the validity of plant patents.²⁸²

Before calling for affirmation of the Federal Circuit's decision, respondent analyzed the facts surrounding the *Bilski* patent under the machine-or-transformation test in similar fashion as the Federal Circuit had.²⁸³ Respondent emphasized that the addition of a computer used to perform the mathematical calculations involved in the patent claims would "not [be] central to the purpose of the method invented by the applicant" and therefore patent-ineligible as "insignificant extra-solution activity."²⁸⁴ As an additional ground for ruling the *Bilski* claims patent-ineligible, respondent proposed the claims would "pre-empt any application of the fundamental concept of hedging and mathematical calculations inherent in hedging consumption' risk" for lack of meaningful claim

Am. Holdings v. Metabolite Labs., Inc., 548 U.S. 124, 127 (2006) (Breyer, J., dissenting from dismissal of a writ of certiorari).

²⁷⁵ Brief for the Respondent, *supra* note 269, at 16–19 (citing 1 NOAH WEBSTER, AN AMERICAN DICTIONARY OF THE ENGLISH LANGUAGE (1828)).

²⁷⁶ *Id.* at 19–25 (arguing that the American patent system elaborates upon, rather than breaks away from, the historical English practice issuing patents primarily for technological or industrial processes). However, respondent conceded that there were some English patents on methods of organizing human activity. *Id.* at 20 n.5.

²⁷⁷ *Id.* at 25–36. Specifically, respondent noted the congressional statement that "anything under the sun that is made by man" was tempered by the subsequent language reading, "is not necessarily patentable under [§ 101] unless the conditions of the title are fulfilled." *Id.* at 28. Respondent interpreted one condition of the title through "the 'commonsense' cannon . . . [that] 'a word is given more precise content by the neighboring words with which it is associated.'" *Id.* at 26. This interpretation enabled respondent to argue that the other § 101 categories of machine, manufacture, and compositions of matter restricted the scope of § 101 processes to those of an industrial or technological vintage. *Id.* at 26–27.

²⁷⁸ *Id.* at 36–44.

²⁷⁹ *Id.* at 44–46.

²⁸⁰ *Id.* at 46–49.

²⁸¹ Brief for the Respondent, *supra* note 269, at 49.

²⁸² *Id.* at 49–50; *see supra* note 258.

²⁸³ Brief for the Respondent, *supra* note 269, at 51–55.

²⁸⁴ *Id.* at 52–53.

delineation – an intolerable attempt to patent an abstract idea.²⁸⁵

c. Reply Brief for Petitioners

The Reply Brief for Petitioners elaborated upon four arguments that had developed during the course of litigation. Petitioners' maintained that upholding the technology limitation on process patents through the machine-or-transformation test would be improper.²⁸⁶ Second, petitioners confronted the respondent's arguments that § 273 broadened the scope of § 101 and that the machine-or-transformation test embodied the scope of § 101.²⁸⁷ The practical application test, alongside other Patent Act limitations, was supported within the third argument.²⁸⁸ Finally, petitioners asserted pitfalls within the machine-or-transformation framework as illustrated by respondent's analysis of petitioners' arguments.²⁸⁹

B. Broader Impact

1. Effect on Business Methods, Computer Programs, and Biotechnology

Bilski's relationship with business method patents is perhaps most obvious,²⁹⁰ yet the total effect the Federal Circuit decision will have is fairly elusive.²⁹¹ Ambiguity stems from the court's mandate that business method patents not be categorically excluded under § 101,²⁹² coupled with the declination to elaborate on the contours of the machine-or-transformation test beyond what the facts required.²⁹³ For example, a patent applicant claiming a business method has very little guidance on whether the business method is sufficiently tied to a particular machine, whether any physical object qualifies as a particular machine,²⁹⁴ or whether the involvement of the machine is "insignificant post-

²⁸⁵ *Id.* at 53–54.

²⁸⁶ *Id.* at 3–20.

²⁸⁷ *Id.* at 20–24.

²⁸⁸ *Id.* at 24–27.

²⁸⁹ Brief for the Respondent, *supra* note 269, at 27–28.

²⁹⁰ *In re Bilski*, 545 F.3d 943, 949 (Fed. Cir. 2008) (identifying the business method at issue, namely "[a] method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price").

²⁹¹ See Scott Bain, *Patently Undecided: The Bilski Case*, 26 INFO. TODAY 2 (2009) ("[T]he court's lengthy attempt to enunciate the new, proper standard, along with exceptions, leaves much to be argued in future cases. Indeed, it seems that the real winners in the *Bilski* decision are the patent lawyers who will battle over the further contours of the law and not the investors in software and business ventures who were seeking more certainty.").

²⁹² *Bilski*, 545 F.3d at 960 (citing *State St. Bank & Trust Co. v. Signature Fin. Group, Inc.*, 149 F.3d at 1375–76)).

²⁹³ *Id.* at 962 ("We leave to future cases the elaboration of the precise contours of machine implementation[.]").

²⁹⁴ *Id.* ("We leave to future cases . . . the answers to particular questions, such as whether or when recitation of a computer suffices to tie a process claim to a particular machine."). In *In re Ferguson*, the Federal Circuit defined "machine" as a "concrete thing, consisting of parts, or of certain devices and combination of devices." See *supra* note 227 and accompanying text. However, the Federal Circuit did

solution” activity.²⁹⁵

Similarly vague is the effect *Bilski* will have on computer program processes.²⁹⁶ Again, ambiguity stems from the Federal Circuit’s refusal to elaborate on the contours of the machine-or-transformation test beyond what the facts required.²⁹⁷ To exemplify, a patent applicant claiming a process carried out by a particular computer program on a particular computer would have little guidance upon whether the computer would suffice the machine branch of the § 101 inquiry,²⁹⁸ or whether the computer would create a mere field-of-use limitation.²⁹⁹ This applicant would also have little guidance on whether the particular computer program must also be embodied on a specific medium.³⁰⁰

Bilski’s § 101 precedent further casts a shadow of ambiguity over the field of biotechnology.³⁰¹ For instance, a patent applicant claiming a method of collecting data about a person’s organs and transforming the “raw data” into a visual representation of numbers thereafter analyzed to detect abnormalities requiring medical attention is left in the dark regarding patent-eligibility.³⁰² To the extent innovative medical diagnostic methods can be characterized as “an inquiry of the extent of the proposed correlation between vaccines and chronic disorders,” it appears that the Federal Circuit would find such methods patent-ineligible as natural phenomena.³⁰³ However, diagnostic processes are probably patent-eligible as long as those methods require the transformative administration of drugs to a human body.³⁰⁴

2. Effect on Trade Secret Consideration

The term “trade secret” has been defined as follows:

A formula, *process*, device, or other *business information* that is kept confidential to maintain an advantage over competitors; information—including a formula,

not explain how that definition excludes a human brain from being a “concrete thing” in light of the statement that “a claimed process wherein all of the process steps may be performed entirely in the human mind is obviously not tied to any machine.” *Bilski*, 545 F.3d at 961 n.26.

²⁹⁵ *Bilski*, 545 F.3d at 1015 (Rader, J., dissenting) (“[T]his opinion propagates unanswerable questions: . . . What constitutes [insignificant] ‘extra-solution activity?’”).

²⁹⁶ See Bain, *supra* note 291; *Bilski*, 545 F.3d at 998 (Mayer, J., dissenting) (stating the majority failed to elucidate one of the “thorniest issues in the patent [eligibility] thicket. . . [T]he extent to which computer software . . . constitute[s] statutory subject matter.”).

²⁹⁷ *Bilski*, 545 F.3d at 962 (“We leave to future cases the elaboration of the precise contours of machine implementation . . .”).

²⁹⁸ See *supra* notes 223–25 and accompanying text.

²⁹⁹ See *Ex parte* Halligan, No. 2008-1588, 2008 WL 4998541, at *1–2, *13–14 (B.P.A.I. Nov. 24, 2008); *Ex parte* Gutta, No. 2008-3000, 2009 WL 112393, at *1–3 (B.P.A.I. Jan. 15, 2009).

³⁰⁰ See *Ex parte* Noguchi, No. 2008-1231, 2008 WL 4968270, at *5–7 (B.P.A.I. Nov. 20, 2008); *Ex parte* Cornea-Hasegan, No. 2008-4742, 2009 WL 86725, at *1, *6 (B.P.A.I. Jan. 13, 2009).

³⁰¹ See, e.g., Christopher M. Holman, *Applying Bilski to Biotechnology and the Life Sciences*, PATENTLY-O, Nov. 4, 2008, <http://www.patentlyo.com/patent/2008/11/applying-bilski.html>.

³⁰² See *Bilski*, 545 F.3d at 1015 (Rader, J., dissenting) (“[T]his opinion propagates unanswerable questions: . . . When is a ‘representative’ of a physical object sufficiently linked to that object to satisfy the transformation test?”).

³⁰³ See *supra* notes 214–17 and accompanying text.

³⁰⁴ See *supra* notes 231–36 and accompanying text.

pattern, compilation, program, device, *method*, *technique*, or *process*—that (1) derives independent economic value, actual or potential, from not being generally known or readily ascertainable by others who can obtain economic value from its disclosure or use, and (2) is the subject of reasonable efforts, under the circumstances, to maintain its secrecy.³⁰⁵

Augmenting this definition, trade secrets can be understood as relatives of patents.³⁰⁶ However, trade secrets are broader in scope because protection of the asset is governed only by the ability of the owner to maintain secrecy whereas patent protection is defined relatively narrowly by the Patent Act.³⁰⁷ Accordingly, inventors may choose to protect their processes or methods through the use of trade secrets rather than patents. Regarding business methods, computer programs and biotechnology, inventors expecting *Bilski* to foreclose their ability to obtain patents will protect their inventions with trade secrets so long as the specific inventions can practically be kept secret.

3. *Effect on Patent Examination*

Patent examiners who evaluate patent applications for, among other things, patent-eligibility under § 101 must meet various requirements set by the PTO.³⁰⁸ Persons applying to become patent examiners “bear the burden of showing the requisite scientific and technical training.”³⁰⁹ Applicants cannot meet this burden by demonstrating they have taken “courses in management, business administration and operations research; courses on how to use computer software; courses directed to data management and management information systems.”³¹⁰ However, *Bilski* specifically declined to categorically exclude business method patents from protection under § 101.³¹¹ It is reasonable to assume that inventors will submit patent applications dealing with business concepts for examination by examiners who will be unable to properly evaluate the patent application. If the issuance of higher quality patents is desired,³¹² the PTO must ensure that patent examiners are skilled in the areas related to § 101 subject matter, including business.

4. *Effect on Deference to the Federal Circuit*

The Federal Circuit has exclusive jurisdiction over patent appeals.³¹³ This

³⁰⁵ BLACK’S LAW DICTIONARY (8th ed. 2004) (emphasis added).

³⁰⁶ MARK A. ROTHSTEIN ET AL., EMPLOYMENT LAW § 8.18, at 516 (1994).

³⁰⁷ *See id.*

³⁰⁸ *See* General Requirements Bulletin for Admission to the Examination for Registration to Practice in Patent Cases Before the United States Patent and Trademark Office (2008), <http://www.uspto.gov/web/offices/dcom/olia/oed/grb.pdf>.

³⁰⁹ *Id.* at 4.

³¹⁰ *Id.* at 7.

³¹¹ *In re Bilski*, 545 F.3d 943, 960 (Fed. Cir. 2008).

³¹² PATRICK LEAHY, THE PATENT REFORM ACT OF 2007, S. REP. NO. 110-259, at 3 (2008), available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_reports&docid=fr259.pdf.

³¹³ 28 U.S.C. §§ 1292, 1295 (2000).

authority enables the Federal Circuit to be a specialized court that adeptly handles, among other matters, highly complex patent cases that might otherwise cause undue conflict among the various United States Courts of Appeals.³¹⁴ Resultantly, a circuit split that might influence the Supreme Court's decision to review a case regarding a patent matter cannot occur. Abrogating three of its own and three of its predecessor courts' decisions en banc in *Bilski* and drawing three dissenting opinions, the Federal Circuit created a situation where review from the Court became necessary to resolve the apparent internal conflict at the Federal Circuit.³¹⁵ Deference to the Federal Circuit should be given in order to allow the resolution of increasingly complex matters, but certainly not to allow the court to "usurp[] the legislative role."³¹⁶

VI. CONCLUSION

Even if the machine-or-transformation test eventually achieved laudable results such as enhancing patent quality, the test leaves a multitude of open-ended questions that belie an entirely reasonable interpretation of the Patent Act, Federal Circuit case law, and Supreme Court precedent.³¹⁷ Moreover, such open-ended questions inject uncertainty into a patent system that is already experiencing turbulence.³¹⁸ Without explaining the machine prong and leaving the transformation prong fairly unrefined,³¹⁹ it is not at all clear why the majority held that the machine-or-transformation test was a better means of rejecting the claims at issue rather than employing the principle that claims for abstract ideas are patent-ineligible.³²⁰

³¹⁴ See S. REP. NO. 97-275, at 1 (1981), reprinted in 1982 U.S.C.C.A.N. 11, 11.

³¹⁵ See *Bilski*, 545 F.3d at 958–60.

³¹⁶ See *id.* at 997 (Newman, J., dissenting).

³¹⁷ See *id.* at 1010–11, 1015 (Mayer & Rader, JJ., dissenting) (explaining that the court failed to clarify "three of the thorniest issues in the patentability thicket" and "propagate[d] unanswerable questions").

³¹⁸ See, e.g., PATRICK LEAHY, THE PATENT REFORM ACT OF 2007, S. REP. NO. 110-259, at 1–4 (2008), available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_reports&docid=f:sr259.pdf; PATRICK LEAHY, THE PATENT REFORM ACT OF 2009, S. REP. NO. 111-18, at 1–3 (2009), available at http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=111_cong_reports&docid=f:sr018.pdf.

³¹⁹ See *supra* notes 130–36 and accompanying text. If the machine-or-transformation test has been the proper standard for determining patent eligibility since 1981, then one might expect more elaboration upon the contours of the test. See *id.*

³²⁰ See *Bilski*, 545 F.3d at 1011 (Mayer, J., dissenting).