Courts Left with Little Guidance Following the Supreme Court's Decision in *Bilski v. Kappos*

I. OVERVIEW

When Bernard Bilski and Rand Warsaw (petitioners) filed a patent application to protect a method for hedging against fluctuations in commodities trading, they never envisioned the nationwide legal controversy that would arise. The controversy hinged on determining the requisite elements necessary to obtain patent protection—specifically, whether a business method satisfies the elements and qualifies for patent protection.[1] The business method in question sought to explain to "buyers and sellers of commodities in the energy market" how to effectively "protect . . . against the risk of price changes" using a "simple mathematical formula."[2] While more than a simple mathematical equation, the patent application did little beyond simply recording a mathematical formula and describing how it was to be applied to the process of commodities trading.[3]

Affirming the lower court's decision, the United States Court of Appeals for the Federal Circuit denied protection to the petitioners' patent application, holding that their application failed the "machine-or-transformation test," which the court determined was the sole basis by which to analyze patentability under section 101 of the Patent Act.[4] On appeal to the United States Supreme Court, the petitioners claimed that the appellate court erred in its application of the "machine-or-transformation test" and sought patent protection for their business

1. Bilski v. Kappos, 130 S. Ct. 3218, 3223 (2010).

2. *Id.* The particular mathematical formula that the petitioners sought to patent was based on longstanding fundamental economic practices that were reduced to a mathematical notation. *Id.* at 3231.

3. *Id.* at 3223-24.

4. *In re* Bilski, 545 F.3d 943, 955 (Fed. Cir. 2008). Under the "machine-or-transformation test," a claimed invention is outside the scope of patent law if "it is not tied to a machine and does not transform an article." *Bilski*, 130 S. Ct. at 3223.

method.[5] The petitioners claimed that their business method fell within the broad wording of section 101 as a patentable process.[6] The United States Supreme Court, in a unanimous decision, *held* that the petitioners were not entitled to patent protection for their business method since the business method itself represented an abstract idea, lacking a discernable patentable process. *Bilski v. Kappos*, 130 S. Ct. 3218 (2010).

II. BACKGROUND

Pursuant to section 101 of the Patent Act, patentable subject matter is defined as "any new and useful *process*, machine, manufacture, or composition of matter, or any new and useful improvement thereof."[7] Recognizing the broad scope of this language, the Supreme Court placed additional limitations on section 101's patent-eligibility requirements by excluding "laws of nature, physical phenomena, and abstract ideas" from patent protection.[8] The Court recognized that such concepts were "part of the storehouse of knowledge of all men . . . free to all men and reserved exclusively to none."[9] Noting this additional limitation, the Court concluded that the section 101 patent-eligibility inquiry is not a wholly dispositive test for determining patent eligibility, but rather a threshold test for determining eligibility, upon which additional requirements must be met.[10]

In the context of "process" claims, prior to the decision in the noted case, the Supreme Court utilized several tests to determine patent eligibility under section 101.[11] Most notably, the Court used the "useful, concrete, and tangible result" test.[12] Under this test, "a process tied to a particular machine, or transforming or reducing a particular article into a different state or thing, will generally produce a 'concrete' and 'tangible'

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5. *See* Benjamin W. Hattenbach & Kenneth J. Weatherwax, Bilski v. Kappos*: A Divided Court Narrowly Reaffirms Patentability of Business Methods*, 22 NO. 9 INTELL. PROP. & TECH. L.J. 15 (2010).

6. *See Bilski*, 130 S. Ct. at 3225.

7. *See* 35 U.S.C. § 101 (2006) (emphasis added). In the noted case the petitioners claimed that their business method was patentable under section 101 as a new and useful process. *See Bilski*, 130 S. Ct. at 3257.

8. Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980).

9. *Bilski*, 130 S. Ct. at 3225 (quoting Funk Bros. Seed Co. v. Kalo Inoculant Co., 333 U.S. 127, 130 (1948)).

10. *See id.* Even though section 101 is a major factor for determining patent eligibility, there are other requirements which must be met, including: novelty (as described in 35 U.S.C. § 102), nonobviousness (as described in 35 U.S.C. § 103), and a proper description of the claim—enablement (as described in 35 U.S.C. § 112). *Id.*

11. *In re* Bilski, 545 F.3d 943, 958-59 (Fed. Cir. 2008).

12. *See* State St. Bank & Trust v. Signature Fin. Grp., 149 F.3d 1368, 1375 (Fed. Cir. 1998).

result" protectable by patent.[13] This test, while widely used, drew criticism for affording patent protection eligibility to certain processes and business methods.[14] In 2006 alone, the United States Patent and Trademark Office reported that almost 10,000 patent applications were filed for "business methods."[15] This sparked a resurgent interest in finding a new test for determining patent eligibility which would exclude business methods, ultimately leading the Federal Circuit to adopt the rigid "machine-or-transformation test."[16] Under such a test, a patent claim based on a process that is linked to a particular machine or which has the ability to transform a particular article to a different fundamental state is eligible for patent protection.[17] The requirement of linking the claim to a particular machine or to the transformation of an article renders the claim not too abstract or theoretical to patent, but rather specifically narrows it beyond the level of abstractness that is routinely denied patent protection.[18]

As the first administrator of our patent system, Thomas Jefferson was clear that the proper forum for deciding the scope of patentability was with the courts.[19] Between 1790 and 1950 Congress left "wide latitude for judicial construction . . . to keep pace with industrial development."[20] As patent law continued to develop into the twentieth century, it was widely accepted that business methods were not considered a patentable art.[21] During the early twentieth century, the inquiry for issuing patents focused on whether the prospective patent's subject material was "a new and useful result for mechanical operations."[22] Because business methods are inherently not connected to a physical machine, nor do they physically transform any particular subject matter, they were routinely denied patent protection until 1952.[23]

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13. *In re Bilski*, 545 F.3d at 959.

14. *See id.* at 976-77 (Newman, J., dissenting) (noting the availability of business method patent protection).

15. *See id.* at 992; *see also* Wynn W. Coggins, USPTO, *Update on Business Methods for the Business Methods Partnership Meeting* 6 (June 19, 2007), http://www.uspto.gov/web/menu/pbmethod/partnership.pps.

16. *See In re Bilski*, 545 F.3d at 955-56.

17. *Id.* at 954.

18. *See id.*

19. *See* Graham v. John Deere Co. of Kan. City, 383 U.S. 1, 9-10 (1966).

20. Bilski v. Kappos, 130 S. Ct. 3218, 3245 (2010) (Stevens, J., concurring) (citing Herman Berman, *Method Claims*, 17 J. PAT. OFF. SOC. 713, 714 (1935)).

21. ANTHONY W. DELLER, WALKER ON PATENTS § 18, at 62 (1937) (stating that a "'system' or method of transacting business is not [a process], nor does it come within any other designation of patentable subject matter").

22. *See* Expanded Metal Co. v. Bradford, 214 U.S. 366, 385-86 (1909).

23. *See generally Bilski*, 130 S. Ct. at 3245-46.

In 1952, Congress modified the existing patent laws, changing the operative language for patent protection in section 101 from "any new and useful *art*" to its current "any new and useful *process*."[24] While the change did not substantively alter the scope of patentable subject matter, it recognized that the courts had long been substituting the phrase "process or method" in the place of "art."[25]

For the first two centuries of the American patent system, courts struggled to define the requisite elements to acquire a patent. However, during that span, the courts consistently rejected patents on so-called business methods.[26] Since Congress updated the Patent Act in 1952, numerous cases have come down hard against protecting business methods under patent protection. In *Gottschalk v. Benson*, the Supreme Court dismissed a patent application for a mathematical algorithm that converted binary-coded decimal numerals into pure binary code, stating that "[a] principle, in the abstract, is a fundamental truth . . . [that] cannot be patented."[27] The Court struck down the claim that an abstract mathematical idea was patentable, holding that such protection would effectively "pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself."[28] The Court noted that in the case of a process claim that did not involve a machine (as in the noted case), the proper analysis would be to consider if the process transformed or reduced an article "to a different state or thing."[29] According to the decision in *Benson*, a patent claim was to be rejected if it neither tied itself to a particular machine nor transformed an article to a different state.[30]

Following the same logic as they used in *Benson* and advancing it a step further, the Supreme Court held in *Parker v. Flook* that no "post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process."[31] In that case, the applicant attempted to patent a procedure related to the oil-refining industry that relied solely on a mathematical algorithm.[32] In order to get around the precedent established in *Benson* of denying

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24. Diamond v. Diehr, 450 U.S. 175, 182 (1981) (emphasis added).
25. *See id.*
26. Lowe's Drive-In Theatres v. Park-In Theatres, 174 F.2d 547, 552 (1st Cir. 1949); *In re* Patton, 127 F.2d 324, 327-28 (C.C.P.A. 1942); *see, e.g.*, U.S. Credit Sys. Co. v. Am. Credit Indem. Co., 53 F. 818, 819 (S.D.N.Y. 1893).
27. 409 U.S. 63, 67 (1972).
28. *Id.* at 71-72.
29. *Id.* at 70.
30. *Id.* at 70-71.
31. 437 U.S. 584, 590 (1978).
32. *Id.* at 585-86.

patent protection to general mathematical formulas, the applicant sought to limit his patent to exclude only other oil-refining companies from utilizing the procedure, effectively tailoring the patent to be enforceable only against certain adverse parties.[33] In rejecting applicant's claim, the Court reasoned that an abstract idea could not be protected by a patent, even if the patent was limited to a particular field.[34] The Court later explained that the decision in *Flook* was meant to show that abstract ideas "cannot be circumvented by attempting to limit the use of the [idea] to a particular technological environment" or by adding "insignificant postsolution activity."[35] Rather, the Court noted that any abstract idea, regardless of claimant's wording or phrasing of the claim, would be denied protection.[36]

The Supreme Court ultimately narrowed the principles established in *Benson* and *Flook* with its decision in *Diamond v. Diehr*.[37] In that case, the applicant sought a patent for a process used for molding rubber into precision products.[38] Included in the claim was a mathematical formula that was used in several steps of the molding process to guide computers in a precise fashion.[39] The Court reasoned that while an abstract idea such as a mathematical formula is not by itself patentable, the use of an abstract idea in the application of a structure or process may deserve patent protection.[40] Invariably, the Court emphasized that proper analysis under section 101 of the Patent Act requires an examination of the whole invention rather than of the individual components of the invention.[41] Finally, the Court concluded that because the applicant's claim was for an industrial process rather than for the individual mathematical formula used in the process, it fell within the requirements of section 101 and was patentable.[42]

III. COURT'S DECISION

In the noted case, the United States Supreme Court affirmed the precedent it previously promulgated in *Benson*, *Flook*, and *Diehr* and

33. *Id.* at 589-90.
34. *Id.* at 594.
35. Diamond v. Diehr, 450 U.S. 175, 191-92 (1981).
36. *See generally Flook*, 437 U.S. at 590 ("[P]atentable subject matter under § 101 is not 'like a nose of wax which may be turned and twisted in any direction.'" (quoting White v. Dunbar, 119 U.S. 47, 51 (1886))).
37. *See* Bilski v. Kappos, 130 S. Ct. 3218, 3230 (2010).
38. *Diehr*, 450 U.S. at 177.
39. *Id.*
40. *Id.* at 187.
41. *Id.* at 188.
42. *Id.* at 191-93.

denied the petitioners' patent protection for their proposed business method.[43] While the Court affirmed the appellate court's decision, it differed in its reasoning as to why a patent should not be issued for the petitioners' particular business method.[44] Rather than use the traditional machine-or-transformation test, which the appellate court adopted, or completely deny protection to business methods, the Court resolved the patentability issue through the analysis of preceding case law stemming from previous patent claims.[45] In light of the decisions in previous cases, the Court found it necessary to deny patent protection to the petitioners' business method, citing that abstract ideas—such as the one in question—are inherently not patentable.[46]

In reaching its decision, the Court first identified section 101 of the Patent Act as a mere first threshold for determining patent eligibility.[47] Pursuant to section 101, the Court recognized four independent categories of claims that are eligible for patents: "processes, machines, manufactures, and compositions of matter."[48] While the wording of section 101 is broad in scope, the Court had previously narrowed its scope by reading in several exceptions to the requirements of patent eligibility—namely, that "laws of nature, physical phenomena, and abstract ideas" are not patent-eligible subject matter.[49] In addition, the Court recognized that even if an invention passes both section 101 scrutiny and is not one of the three exceptions laid out by the Court, in order to qualify for protection it must still satisfy other requirements such as novelty, nonobviousness, and the claim must be fully and particularly described.[50]

Next, the Court looked to categorize a business method into the language of section 101, determining that it falls under the category of

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43. *See* Bilski v. Kappos, 130 S. Ct. 3218, 3231 (2010).

44. *Id.* at 3226.

45. *See id.* at 3230-31.

46. *Id.* at 3231.

47. *Id.* at 3225; *see also* 35 U.S.C. § 101 (2006) ("Whoever 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 therefor, subject to the conditions and requirements of this title.").

48. *Bilski*, 130 S. Ct at 3225. The court recognized that the congressional intent behind such broad wording was to afford patent law with a wide scope of application and thereby encourage ingenuity and design. Diamond v. Chakrabarty, 447 U.S. 303, 308-09 (1980).

49. *Bilski*, 130 S. Ct. at 3225 (citing *Chakrabarty*, 447 U.S. at 309).

50. *Id.*; *see also* 35 U.S.C. § 102 (novelty required for patent protection), § 103 (claim must be nonobvious), and § 112 (claim must be fully and particularly described).

"process."[51] Having decided that, the Court turned its attention to the appellate court's handling of a business method as a process.[52] The Supreme Court rejected the appellate court's analysis, emphatically denying its contention that the machine-or-transformation test was the exclusive test under section 101 for determining patent eligibility.[53] The Supreme Court held that the term "process" does not require that the subject matter be tied to a particular machine or a transformation of an article since such a test would violate the principles of statutory interpretation of section 101.[54] Rather, the Court held that the machine-or-transformation test is merely a "clue to the patentability of a process claim" but is not by itself dispositive.[55] By coming to this conclusion, the Court essentially dismissed the appellate court's main theory of patentability—furthering the need for new tests to determine patentable subject matter.[56]

The Court next addressed the underlying question of whether a business method could ever qualify as a process under section 101, or whether business models are inherently not processes and therefore cannot qualify for patent protection.[57] To this question the Court answered that the terms "process" and "business method" are not mutually exclusive.[58] The Court concluded that to exclude all business methods from patent protection would undermine the language of section 101.[59] By way of statutory interpretation, the Court explained that the Patent Act explicitly allows the patenting of business methods based on section 273(a)(3), which defines a method as "a method of doing or conducting business."[60] Through such a definition, the Court reasoned

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51. *See Bilski*, 130 S. Ct. at 3225. "Process" is defined as a "process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material." 35 U.S.C. § 100(b).

52. *See Bilski*, 130 S. Ct. at 3225-26.

53. *Id.* at 3226-27.

54. *Id.* at 3226.

55. *Id.* at 3227 (citing Gottschalk v. Benson, 409 U.S. 63, 70 (1972)). Sole application of the machine-or-transformation test would lead to uncertainty with regard to patents in several fields, including software, advanced diagnostic medicine, data compression, and digital signals. *Id.*

56. *Id.* at 3225-26.

57. *Id.* at 3228.

58. *Id.* Using this logic, the court defined "process" as "a method of doing or conducting business" *Id.* (quoting 35 U.S.C. § 273(a)(3) (2006)).

59. *Id.* at 3229 (holding that the Patent Act leaves open the possibility that there are at least some processes that can be fairly described as business methods that are within the patentable subject matter under section 101).

60. *Id.* at 3228. More specifically, the Court determined that sections 273(a)(3) and (b)(1) not only fail to reject the patentability of business methods, but expressly allow business methods as "a method of doing or conducting business," affirmatively asserting that business

that the explicit language of the Patent Act is an affirmative acknowledgement that business methods *can* in fact be patented.[61]

Having dismissed previous patent-eligibility tests and the appellate court's analysis, the Court was left with no straightforward law to draw from in rendering a decision with regard to the patent eligibility of business methods.[62] This forced the Court to rely to their previous decisions in *Benson*, *Flook*, and *Diehr*.[63] While the decisions in *Benson* and *Flook* strongly favored limiting patent eligibility in the present situation, the Court also had to contend with the contrary decision in *Diehr*.[64]

Is a business method analogous to a simple abstract idea or is it the *application* of an idea? The Court held that the business method proposed by the petitioners was more analogous to the claims in *Benson* and *Flook* than that claimed in *Diehr*.[65] The Court concluded that rather than applying the idea to a physical process, as was the case in *Diehr*, the petitioners were attempting to claim title to an abstract idea—a mathematical formula—which, as previously mentioned, is not patentable.[66] Based upon this conclusion, the Court forwent any further discussion into defining the term "process," satisfied that the petitioners' claims were effectively eviscerated through preceding case law.[67]

IV. ANALYSIS

The decision reached by the United States Supreme Court will confound future courts' decisions, leaving a sense of uncertainty with regard to the proper test to apply in determining the patentability of various subject matters. By rejecting the clear and descriptive machine-or-transformation test offered by the appellate court in favor of relying on preceding case law, the Supreme Court established that patent eligibility should remain broad, leaving lower courts with little basis upon which to render future decisions.[68] This indecision at the Supreme Court level will

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methods can potentially qualify for patent protection and thereby laying the groundwork for rejecting the machine-or-transformation test. *Id.*

61. *Id.*

62. *See id.* at 3229-30.

63. *Id.*

64. See Diamond v. Diehr, 450 U.S. 175, 177 (1981); Parker v. Flook, 437 U.S. 584, 585-86 (1978); Gottschalk v. Benson, 409 U.S. 63, 64-67 (1972).

65. *See Bilski*, 130 S. Ct. 3231.

66. *Id.*; *see also* Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980) ("Einstein could not patent his celebrated law that $E=mc^2$; nor could Newton have patented the law of gravity. Such discoveries are 'manifestations of . . . nature, free to all men and reserved exclusively to none.'").

67. *See Bilski*, 130 S. Ct. at 3231.

68. *See id.* at 3230-31.

be frowned upon by the lower courts, which have struggled and made little progress in the field of patent eligibility for over thirty years.[69] By refusing to take a firm stand or establish any particular rules for patent eligibility, the Supreme Court has blurred and fuddled section 101's application and scope.

While the Court rejected the petitioners' claims for patent protection, it also undoubtedly held that business methods are not automatically forbidden from the realm of patent protection. In Justice Kennedy's majority opinion, there is no specific mention of a single favored test by the Court, but rather an analysis as to the ineffectiveness of previous tests and decisions.[70] This begs the question of what test a court should rely on when determining patent eligibility for a business method or similar process.

Even before the Supreme Court rejected the machine-or-transformation test, courts were confounded as to the proper test to apply.[71] In one recent case, it became clear that the machine-or-transformation test was unworkable and collided with the "natural phenomena" prohibition established in *Diamond v. Chakrabarty*, which denies patent protection to processes that involve natural phenomena.[72] Some scholars argue that such a collision of tests can be readily resolved if section 101 is removed from the Patent Act altogether, in favor of the individual requirements of sections 102, 103, and 112—which require novelty, nonobviousness, and enablement, respectively.[73] These sections, in conjunction with the "natural phenomenon" exclusion provided by *Chakrabarty*, would present courts with uniformity in deciding cases and would implicitly afford only the most deserving inventions and discoveries with patent protection.

While the Supreme Court's decision suggests that the machine-or-transformation test is still applicable and valid for determining patent claims under section 101, it also suggests the likelihood that a future

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69. *See* Orian Armon & Eamonn Gardner, *Practical Advice on Drafting Method Claims that Satisfy 35 U.S.C. § 101 After* Bilski v. Kappos, 14 No. 3 J. INTERNET L. 1 (2010).

70. *Bilski*, 130 S. Ct. at 3225-31.

71. In deciding patent eligibility, courts often had to sift through tests including those in sections 101, 102, 103, and 112 of the Patent Act; the machine-or-transformation test; the "concrete test" as laid out in *State Street Bank*; the "natural phenomena" requirements set forth in *Chakrabarty*; and several other tests and requirements established in previous case law.

72. *See generally* Prometheus Labs, Inc. v. Mayo Collaborative Servs., 581 F.3d 1336 (Fed. Cir. 2009).

73. *See generally* Michael Risch, *Everything Is Patentable*, 75 TENN. L. REV. 591, 591-92 (2008). Professor Risch suggests implementing a single rule: "any invention that satisfies the Patent Act's requirements of category, utility, novelty, non-obviousness, and specification is patentable." *Id.* at 591.

decision is waiting around the corner to clarify the ongoing uncertainty. It is likely that a future test will rely heavily upon the Court's decision in *Diehr*, since that decision related an "abstract" idea to an actual useful process rather than a patent for the abstract idea itself.[74] Until the next case involving this ongoing issue is decided, patent officers must continue to rely on the machine-or-transformation test and their best judgment when issuing patents to prospective claimants.[75]

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74. *See generally* Diamond v. Diehr, 450 U.S. 175 (1981).

75. *See generally* Memorandum from Robert W. Bahr, Acting Associate Commissioner for Patent Examination Policy to Patent Examining Corps (June 28, 2010) *available at* http://www.uspto.gov/patents/law/exam/bilski_guidance_27jul2010.pdf.

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