NOTE

Exploring the Abstract: Patent Eligibility
Post *Alice Corp v. CLS Bank*


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**I. INTRODUCTION**

Most Americans are probably aware of the patent system. For instance, most people know that someone who develops a new machine or process can seek a patent for it from the U.S. government.\(^1\) Most people are also probably aware that there must be some limits on what things can and cannot be patented. For instance, the idea that one could not patent such things as the moon or the sun, forces of nature such as wind or gravity, or abstract things such as love, trust, or happiness would not be surprising to many. It can become somewhat more difficult to consider whether one should be able to patent more concrete things. For instance, while one might assume that Sir Isaac Newton might not have been able to take out a patent on the concept of gravity, what about his law of universal gravitation or its accompanying mathematical equation – things that took considerable work and effort to develop? Could Albert Einstein have sought a patent for his famous mass energy equivalence equation? Could the Ford Motor Company receive a patent on its process of assembling cars using interchangeable parts on an assembly line? Could someone seek to patent such elementary business practices as double-entry bookkeeping, collective investments through the use of mutual funds, or the use of a clearinghouse to reduce settlement risk? Could someone claim a patent on an improvement on these business methods by, say, introducing the use of a computer?

These questions lie at the heart of the U.S. Supreme Court’s decision in the case of *Alice Corp. Pty. Ltd. v. CLS Bank International*.\(^2\) The decision concerns one of the three longstanding common law exceptions to patent eligibility: abstract ideas.\(^3\) In the course of the decision, the Court attempted to settle an issue that it had seldom addressed. The patents at issue in the case reflect concerns surrounding the patenting of both business methods and

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1. B.S., University of Missouri, 2013; J.D. Candidate, University of Missouri School of Law, 2016; Associate Managing Editor, *Missouri Law Review*, 2015-2016. With thanks to Professor Dennis Crouch for his advice and support in developing this Note and the *Missouri Law Review* staff in helping to edit it.
4. *Id.* at 2354.
software, two areas that have proved somewhat complicated for the lower courts to navigate. At heart, the claimed patents represent a process for performing business transactions, commonly referred to as business method patents. But the primary improvement claimed in the patent was the application of a computer and related software. Thus, the Court’s decision reflected on both areas of patent law. In a unanimous decision, the Court determined that the claimed patents were drawn to an abstract idea and were therefore ineligible for patent protection.

While the outcome of the case is noteworthy, the real significance is that the Court used this case to formally adopt a new test to be applied in cases concerning potential abstract ideas. This test is actually a reconfiguration of an earlier test developed for a similar problem regarding the so-called natural phenomenon exception. The test consists of two parts. The first asks whether there is, in fact, an abstract idea in the claimed patent. The second part then goes on to ask if there is any “inventive concept” that will transform the abstract idea and make it patent eligible.

While the adoption of this test is helpful because it takes the burden off the lower courts to devise their own tests, the decision leaves open quite a few questions and raises several new ones. For instance, the Court directly refused to give a definition of the term “abstract,” though it did help provide some important clues that build and expand on previous precedent and potentially widen its use. There is also a concern regarding the “inventive concept” requirement in that this seemingly innocuous phrase may be misinterpreted to mean less than the Court meant it to say. Finally, there is the ever-important concern of reading this case in light of past decisions including the seemingly contradictory case of Association for Molecular Pathology v. Myriad Genetics in order to grasp a full understanding of the Court’s decisions in the area of patent eligibility. Indeed, Alice will clearly have a profound impact on the law of intellectual property, though it is difficult to determine exactly what those eventual effects will be.

This Note first sets forth the facts and the ultimate holding of the Supreme Court’s decision in Alice. It then details the historical background surrounding the ineligibility of abstract ideas for patent protection that has arisen from the Supreme Court and lower federal courts’ past decisions. Next, it examines in more in detail the Court’s reasoning as applied in this particular case. Finally, this Note discusses several of the questions raised by the Court’s decision: what exactly constitutes an “abstract idea,” what is the

4. Id. at 2353.
5. Id. at 2352.
7. Alice Corp. Pty. Ltd., 134 S. Ct. at 2355.
8. Id.
9. Id.
10. See id. at 2357.
full meaning of the Court’s “inventive concept” requirement, and how are we to interpret this decision in light of Court’s decision in Myriad?

II. FACTS AND HOLDING

Alice Corporation ("Alice Corp."), an Australian entity and the petitioner in the suit, was the assignee of four patents granted by the U.S. Patent and Trademark Office between 1993 and 2005. The purpose of the underlying invention in these patents was to mitigate settlement risks, the risk that only one party in a financial exchange will satisfy its obligation. The patents did this through the use of a computer as a third party intermediary. The computer was tasked with creating “shadow” accounts that mirrored the real world accounts of exchange institutions such as banks. The computer updated these accounts in real time as transactions occurred and only allowed transactions when the records indicated that the transacting party had sufficient funds to satisfy the obligation. The computer then passed along only the allowed transactions to the actual financial institutions, “thus mitigating the risk that only one party would perform the agreed upon exchange.” Put in substantially simpler terms, the patent was a way of performing the functions typically performed by a clearinghouse with a computer. The actual patents included both the described method for mitigation risk, a computer system for carrying out the method, and the media that contained the program code.

CLS Bank International and CLS Services Ltd., which together form CLS Bank, the respondent in the case, is a company that operates “a global network that facilitates currency transactions.” In May 2007, CLS brought suit against Alice Corp. in the Federal District Court for the District of Columbia “seeking a declaratory judgment of non-infringement, patent invalidity, and patent unenforceability.” Alice Corp. responded by counter claim-

13. *Id.*
14. *Id.*
15. *Id.*
16. *Id.* (quoting CLS Bank Int’l. v. Alice Corp. Pty. Ltd., 717 F.3d 1269, 1285 (Fed. Cir. 2013), aff’d, 134 S. Ct. 2347 (2014)).
17. *Id.*
20. *Id.*
ing infringement by CLS Bank.\textsuperscript{22} Both parties then filed cross motions for summary judgment to determine whether the asserted claims were patent eligible.\textsuperscript{23} The district court held that all of the asserted claims were ineligible for patent protection because they contained patent-ineligible subject matter, specifically that of an abstract idea.\textsuperscript{24}

A three-judge panel of the Court of Appeals for the Federal Circuit\textsuperscript{25} reversed the district court’s holding, reasoning that it was not “manifestly evident” that Alice Corp.’s claims were an abstract idea.\textsuperscript{26} CLS then filed a request for a rehearing \textit{en banc}, which was granted\textsuperscript{27} and which vacated the circuit court’s panel opinion.\textsuperscript{28} The \textit{en banc} review held, in a very brief \textit{per curiam} opinion, that Alice Corp.’s claims were not patent eligible and affirmed the decision of the District Court.\textsuperscript{29} The Federal Circuit Court of Appeal’s \textit{en banc} panel was deeply divided over the issues. The five-member plurality held that none of Alice Corp.’s claims were patent eligible.\textsuperscript{30} They held that the claims did no more than “draw on the abstract idea of reducing settlement risk by effecting trades through a third-party intermediary.”\textsuperscript{31} A four-member minority argued to reverse the district court’s determination that Alice Corp.’s system claims were ineligible.\textsuperscript{32}

The Supreme Court of the United States granted certiorari and ultimately affirmed the \textit{en banc} decision of the Federal Circuit Court of Appeals.\textsuperscript{33} In doing so, the Court first held that the two-step framework for determining the patent eligibility of applications – originally set forth for laws of nature in \textit{Mayo Collaborative Services v. Prometheus Laboratories} – would be applied

\begin{itemize}
  \item \textsuperscript{22} \textit{Alice Corp. Pty. Ltd.}, 134 S. Ct. at 2353.
  \item \textsuperscript{23} \textit{Id.}
  \item \textsuperscript{24} \textit{CLS Bank Int’l}, 768 F. Supp. 2d at 255.
  \item \textsuperscript{25} This is an intermediate-level court that hears all patent and trademark appeals among other issues. \textit{United States Court of Appeals for the Federal Circuit}, \textsc{Encyclopædia Britannica}, http://www.britannica.com/EBchecked/topic/901154/United-States-Court-of-Appeals-for-the-Federal-Circuit (last visited Apr. 10, 2015).
  \item \textsuperscript{26} \textit{CLS Bank Int’l v. Alice Corp. Pty. Ltd.}, 685 F.3d 1341, 1356 (Fed. Cir. 2012).
  \item \textsuperscript{28} \textit{CLS Bank Int’l v. Alice Corp. Pty. Ltd.}, 717 F.3d 1269, 1273 (2013).
  \item \textsuperscript{29} \textit{Id.} at 1274.
  \item \textsuperscript{30} \textit{Id.} at 1274.
  \item \textsuperscript{31} \textit{Id.} at 1286.
  \item \textsuperscript{32} \textit{Id.} at 1292. Of this minority, two would still uphold the majority’s decision regarding the method claim. \textit{Id.} One judge wrote a separate opinion also holding that the system claims were patent eligible. \textit{Id.} at 1313-14 (Moore, J., dissenting in part). Another judge filed a separate dissent claiming that all of Alice Corp.’s claims were patent eligible. \textit{Id.} at 1321, 1327 (Newman, J., concurring in part and dissenting in part). Two other judges filed a separate dissent that came to the same conclusion. \textit{Id.} at 1327, 1333 (Linn, J. & O’Malley, J., dissenting).
  \item \textsuperscript{33} \textit{Alice Corp. Pty. Ltd. v. CLS Bank Int’l}, 134 S. Ct. 2347, 2354 (2014).
\end{itemize}
The Court then applied this newly refurbished test and further held that the claims at issue did in fact encompass an abstract idea and that the proposed method claims failed to transform the abstract idea into a patent-eligible invention. Finally, the Court held that the media and systems claims were substantially similar to the methods claim and that they were therefore also patent ineligible.

III. LEGAL BACKGROUND

The power of the U.S. government to grant patents has existed since the country’s founding. It is one of the powers specifically outlined and granted to Congress in the U.S. Constitution. The Constitution states that Congress shall have the power “[t]o 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.” Of course, there are limitations on what can be patented and what cannot. For instance, Congress has enacted statutory language that sets out the limits on what types of things might be patented. The language of the statute reads: “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.”

In addition to the statutory provision, the Supreme Court has also created several exceptions to what can properly be patented. For example, the Court has held that natural phenomena, even a previously unknown natural phenomenon, cannot be patented. The Court has stated that such things as the qualities of certain bacteria, “like the heat of the sun, electricity, or the qualities of metals, are part of the storehouse of knowledge of all men.” In a similar vein, the Court has held that laws of nature cannot be patented either. For instance, the Court has noted that Einstein could not have patented his famous “e=mc²” equation, nor Newton his theory of gravity. The Court

34. Id. at 2355.
35. Id. at 2357.
36. Id. at 2360.
38. Id.
40. Id. Thus, something that is not a process, method, machine, manufacture, composition of matter, or an improvement thereof may not be patented; however, this list is usually considered so broad and inclusive that courts have held that by passing it, Congress intended to include “anything under the sun that is made by man.” Diamond v. Diehr, 450 U.S. 175, 182 (1981).
42. Id.
43. Diehr, 450 U.S. at 185.
has concluded as a general rule that such things are “free to all men and reserved exclusively to none.”

The last important exception to the ability to patent that the Supreme Court has defined is that abstract ideas are not patentable. This concept was first set forth in one of the earliest patent cases heard by the Supreme Court. In *Le Roy v. Tatham*, a case heard in 1852, the Court held that “[a] principle, in the abstract, is a fundamental truth; an original cause; a motive;” and that “these cannot be patented, as no one can claim in either of them an exclusive right.”

A. Early Development

One year after deciding *Le Roy v. Tatham*, the Court decided the case of *O’Reilly v. Morse*, which discussed in detail the problems associated with patenting abstract ideas. This case involved the celebrated Samuel Morse, inventor of the telegraph and the code that bears his name. Mr. Morse had filed for, and received, a patent for his invention in 1840. This was followed by a reissue for improvement in 1846. Finally, the patent was reissued again in 1848, which was the patent that the Court was being called on to consider. Among the claims made in his patent was a claim for “the use of the motive power of the electric or galvanic current, which [he] call[ed] electro-magnetism, however developed for marking or printing intelligible characters, signs, or letters, at any distances.” In deciding the case, the Court concluded that this claim was too broad and invalidated the claim. It noted that Morse was attempting to patent the very idea of written communication by electro-magnetism independent of the means or machinery used. The Court was concerned that granting this patent would prevent any future inventor from patenting a device that used the same concept even if it did so in a manner that was less complicated, more reliable, or cheaper. In addition, the Court noted that the nature of this patent would give Morse control over any future combination of his invention and then-unknown technology.

45. Funk Bros. Seed Co., 333 U.S. at 130.
47. Id.
50. Id., 56 U.S. at 83.
51. Id.
52. Id.
53. Id. at 112.
54. Id. at 113, 120.
55. Id. at 113.
56. Id.
57. Id.
This essentially meant that Morse was claiming “an exclusive right to use a manner and process which he has not described and indeed had not invented, and therefore could not describe when he obtained his patent.”

Fast-forward nearly 120 years to the case of *Gottschalk v. Benson*. This case, which represented the next milestone in Supreme Court jurisprudence on abstract ideas, involved an attempt to patent a method for converting binary-coded decimal numerals into pure binary numerals. In other words, the patent was issued for a process by which computers could solve mathematical problems by converting one form of numerals into another using a specific formula. The claim was not limited to any particular technology, machine, or end use, and applied to any digital computer. The Court concluded that the patent was in fact attempting to patent an idea, namely the formula itself. The Court came to this conclusion by observing that the application of the patent had no use except in connection with a digital computer. Therefore, the only use for the formula was for the proposed process, and allowing a patent on the process would effectively preempt the formula and serve as a patent on the formula itself. The Court further observed that the claim was “so abstract and sweeping as to cover both known and unknown uses of the [binary-coded decimal] to pure binary conversion.” Once again, the Court held that “abstract intellectual concepts are not patentable, as they are the basic tools of scientific and technological work.” However, it is important to note that the Court carved out a particular caveat: while an abstract idea was not patentable, an application of such an idea “to a new and useful end” might be.

The extent of this caveat was more fully explored in the Supreme Court’s next important patent case, *Parker v. Flook*, a decision handed down in 1978. *Flook* concerned a patent for a process for updating “alarm limits” during catalytic conversions. These alarm limits were numbers that indicated upper thresholds for various conditions, such as temperature and pressure, which would trigger an alarm if reached during the catalytic conversion. The patent in this case consisted solely of a new algorithm or mathematical formula that was applied as part of a preexisting conventional three-step pro-

58. *Id.*
59. 409 U.S. 63 (1972).
60. *Id.* at 64.
61. *Id.* at 65.
62. *Id.* at 64.
63. *Id.* at 71.
64. *Id.*
65. *Id.* at 71-72.
66. *Id.* at 68.
67. *Id.* at 67.
68. *Id.*
70. *Id.* at 585.
71. *Id.*
cess to update the alarm limits during the catalytic conversion of hydrocarbons. Therefore, the question before the Court was whether a new formula applied to an existing process was patent eligible.

The respondent in *Flook* tried to distance himself from the precedent in *Benson*, reasoning that, because he was restricting his use of the formula to a specific purpose, he would not preempt the formula and that its other uses would remain part of the public domain. The Court did not accept this argument. The Court first reaffirmed the idea that the mere fact that a patent included an abstract idea did not preclude it from patent eligibility if it managed to apply that idea to a new and useful end. But the Court went on to say that “[t]he process itself, not merely the mathematical algorithm, must be new and useful” and that “the novelty of the mathematical algorithm is not a determining factor at all.” The Court reasoned that, known or unknown, such mathematical formulas remained part of the “basic tools of scientific and technological work” and were to be considered part of the prior art, that is, known and familiar. The Court concluded that, because the patent as a whole contained no new inventive feature other than the un-patentable mathematical formula, it was not patentable.

The case of *Diamond v. Diehr*, handed down three years later, illustrates when an abstract idea may be patented. In *Diehr*, the patent at issue concerned a process for molding raw rubber into cured, finished products. The respondents claimed that their patent differed from the existing process in that they constantly measured the temperature inside the mold and then used a mathematical formula to accurately calculate the required curing time. The Court noted that the patent relied on the use of a well-known mathematical formula to calculate the curing times. However, the Court concluded that the patent would not preempt the formula because it was tied to all the other steps in the claimed process. In short, the Court held that the claimed patent was “nothing more than a process for molding rubber products and not [] an

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72. *Id.*
73. *Id.* at 588.
74. *Id.* at 590.
75. *Id.*
76. *Id.* at 590-91.
77. *Id.* at 591.
78. *Id.* at 591-92 (quoting Gottschalk v. Benson, 409 U.S. 63, 67 (1972)).
79. *Id.* at 594.
81. *Id.* at 177.
82. *Id.* at 178.
83. *Id.* at 187. The mathematical equation in question was the Arrhenius Equation. *Id.* at 178. This equation was first proposed by Svante Arrhenius in 1889. Wikipedia, *Arrhenius Equation*, http://en.wikipedia.org/wiki/Arrhenius_equation (as of Apr. 10, 2015, 14:18 GMT).
attempt to patent a mathematical formula. The Court affirmed what it had previously hinted at, that a claim that included an abstract idea was patentable, provided that the abstract idea was applied as part of a process that – as a whole – was new or innovative and thus something that the patent laws were designed to protect. Despite the Court’s insistence that the cases of Flook and Diehr were distinguishable, they contained enough similarities to create problems for the lower courts tasked with applying them.

B. Developments in the Lower Courts

Following the trilogy of Benson, Flook, and Diehr, approximately thirty years passed with relatively few Supreme Court decisions concerning patents, a span that was broken in 2010 with the case of Bilski v. Kappos. During this thirty-year drought, however, the lower federal circuit courts were busy attempting to formulate a test that would allow them to administer the Supreme Court’s prior decisions. One of the first tests the lower courts developed was called the Freeman-Walter-Abele test, developed by the Court of Customs and Patents Appeals. This test was named after a trilogy of cases that took place shortly after Flook. The test itself consisted of two parts. First, the court analyzed the patent at issue to determine if it contained an abstract idea, like a mathematical algorithm. If such an idea was found, then the claim had to be analyzed in its entirety to see if that idea was applied to any “physical elements or process steps.” If so, then the idea would be patentable; if it failed to apply the algorithm to a physical element or step and instead simply produced the mathematical result, then it would not be. The courts focused primarily on the existence of “mathematical algorithms” for their determination of abstractness, drawing on the Supreme Court’s decisions. This led to some rather liberal readings where ideas that might otherwise have been considered abstract were found not to be for lack of an algorithm.

However, the Freeman-Walter-Abele test proved to be short-lived. At nearly the same time it was being developed, the Federal Court of Appeals for the Federal Circuit was formed. In 1998, this new court, which initially

85. Id. at 191.
86. Id. at 192-93.
87. 561 U.S. 593 (2010).
89. In re Pardo, 684 F.2d at 915.
90. Id.
91. Id.
92. Id.
93. Id. at 915-16.
94. Id. at 916.
adopted the Freeman-Walter-Abele test, would dismiss it in favor of a new test.96 This test, labeled the “useful, concrete, and tangible result” test, focused on whether the abstract idea had been employed to achieve some practical application creating a useful, concrete, and tangible result.97 In dismissing the Freeman-Walter-Abele test, the court noted that it could easily be misleading, as it was possible for a patent application to contain an abstract idea like an algorithm and yet still be patent eligible.98 Instead, the court determined that the unpatentability of such abstract ideas arose from them being “disembodied concepts” that were in no way useful and that the obvious cure was to apply the algorithms in a useful way.99 In deciding the case, the court also placed significant emphasis on the language of 35 U.S.C Section 101 as interpreted by the Supreme Court to allow “anything under the sun that is made by man.”100 Thus, the court was putting significant emphasis on Diehr and later cases and reading the Supreme Court’s decisions and the legislative intent even more broadly.101

For this reason, in State Street Bank & Trust Co. v. Signature Financial Group, Inc., the Federal Court of Appeals for the Federal Circuit held that a patent that involved managing mutual funds was patent eligible even though it contained and relied upon an abstract mathematical algorithm.102 This case is especially important because the court eliminated the so called “business method” exception.103 This exception had been developed by some judges and scholars based on older but no longer relevant legal principles.104 The court instead determined that whatever business method exception did exist was merely a subset of another patent eligibility exception, i.e. those cases that had been seen as striking down patents as being business methods had really been striking them down for abstractness, obviousness, or lack of novelty.105 This considerably widened the fields of what could be patented.

However, in 2008 the Federal Court of Appeals for the Federal Circuit would eventually reject the “useful, concrete, and tangible result” test as well.106 In its place, the court adopted the “machine-or-transformation” test.

97. Id. at 1373.
98. Id. at 1374.
99. Id. at 1373.
100. Id. (quoting Diamond v. Chakrabarty, 447 U.S. 303, 309 (1980)).
101. Id.
102. Id.; see also AT&T Corp. v. Excel Commc’ns, Inc., 172 F.3d 1352, 1356, 1361 (Fed. Cir. 1999) (applying same test to a patent for the improvement of message recording for telephone systems and finding it patent eligible despite it being dependent on simple mathematical equations).
103. State St. Bank, 149 F.3d at 1375.
104. Id.
105. Id. at 1375-76.
106. In re Bilski, 545 F.3d 943, 959-60 (Fed. Cir. 2008).
test.\textsuperscript{107} Under this test, the court concluded that an idea was patent eligible if “it is tied to a particular machine or apparatus” or “transforms a particular article into a different state or thing.”\textsuperscript{108} Once again, this test was based heavily on the Supreme Court’s decision in \textit{Diehr}.\textsuperscript{109} Interestingly, the court that created the test admitted the difficulty of squaring it with the earlier Supreme Court decision in \textit{Benson}, and its efforts to defend the test were questioned by both the respondents in the case and \textit{amici.}\textsuperscript{110}

\textbf{C. The Supreme Court Begins to Reexamine the Doctrine}

The “machine-or-transformation” test was the test that the Supreme Court considered in the \textit{Bilski} case.\textsuperscript{111} The patent at stake in \textit{Bilski} was a business method patent that purported to provide a means for hedging against risk.\textsuperscript{112} The Court considered the Federal Circuit’s machine-or-transformation test before ultimately rejecting it as the sole test for patent eligibility.\textsuperscript{113} However, the Court did concede that the test represented a good clue as to patent eligibility.\textsuperscript{114} Despite dismissing the tests proposed by the lower courts, the Supreme Court declined to institute its own.\textsuperscript{115} All of the justices agreed that the idea at issue constituted an abstract idea and therefore was not patent eligible.\textsuperscript{116} The Court noted that the concept of hedging was a fundamental economic principle, a staple of any introductory course in finance.\textsuperscript{117} The Court concluded that granting the patent would effectively preempt the idea and prevent anyone else from using it.\textsuperscript{118} Thus, the Court began to shift the focus of abstractness from the existence of specific properties, such as mathematical algorithms, back toward the concept of preemption outlined in \textit{Benson} and \textit{Flook}. Unfortunately, because the Court made this decision without announcing a new test of its own, it left the lower courts to fend for themselves once more.

While the Court in \textit{Bilski} was unwilling to develop a test for patents involving abstract ideas, it did manage to develop a test for those involving laws of nature in \textit{Mayo Collaborative Services v. Prometheus Laboratories, Inc.}\textsuperscript{119} The patent in \textit{Mayo} concerned the application of laws of nature re-
garding the concentration of certain thiopurine metabolites in the bloodstream to determine the proper dose of drugs that were needed to treat a patient.\textsuperscript{120} The test that the Supreme Court developed to determine the patent’s eligibility consisted of two parts.\textsuperscript{121} First, the Court asked if the patent in question set forth a law of nature.\textsuperscript{122} If the Court determined that it did, as was the case in \textit{Mayo}, then it asked if the patent claims put forward enough additional features to show that that the claim at issue actually incorporated the natural law into some new and useful process.\textsuperscript{123} To put it another way, the Court wanted sufficient application to ensure that the patent was not merely the result of “a drafting effort designed to monopolize the law of nature itself.”\textsuperscript{124} The Court made it very clear that it would not accept a patent that did little more than re-state the law of nature and then simply say, “apply it.”\textsuperscript{125} The Court then proceeded to examine the patent at issue in \textit{Mayo} and determined that this was precisely what the patent did.\textsuperscript{126} The essence of the patent, according to the Court, was to tell doctors to first administer thiopurine, then measure the thiopurine metabolites in the blood, and finally to apply the law of nature to determine the amount of drug to give.\textsuperscript{127} Because the Court determined that these steps did not add enough to transform the un-patentable law of nature into a patentable process, it found the claim patent ineligible.\textsuperscript{128}

The case of \textit{Association for Molecular Pathology v. Myriad Genetics, Inc.}, decided the year following \textit{Mayo}, provides a curious comparison.\textsuperscript{129} \textit{Myriad} concerned a patent for specifically isolated sections of human DNA and its synthetically created cDNA counterpart.\textsuperscript{130} Myriad Genetics, Inc. (“Myriad”), the Company that had filed the patent, had discovered the precise location of two specific genes in human DNA, mutations of which increase the risk of developing some forms of breast and ovarian cancer.\textsuperscript{131} In addition to the specific DNA, Myriad was also seeking a patent on the cDNA (complimentary DNA), which was identical to the DNA except for the removal of the non-coding portions so that only the genetically coding (and therefore medically interesting) portions of the DNA remained.\textsuperscript{132} The Court quickly rejected the patent for the isolated forms of human DNA.\textsuperscript{133} It concluded that the mere act of finding and isolating the already-existing DNA

\textsuperscript{120} Id. at 1294.
\textsuperscript{121} Id. at 1297.
\textsuperscript{122} Id. at 1296-97.
\textsuperscript{123} Id. at 1297.
\textsuperscript{124} Id.
\textsuperscript{125} Id. at 1294.
\textsuperscript{126} Id. at 1298.
\textsuperscript{127} Id. at 1295.
\textsuperscript{128} Id. at 1298.
\textsuperscript{129} 133 S. Ct. 2107 (2013).
\textsuperscript{130} Id. at 2112.
\textsuperscript{131} Id.
\textsuperscript{132} Id. at 2113.
\textsuperscript{133} Id. at 2117.
did not make them patent eligible since they were existing natural phenomena. The Court relied on the fact that Myriad neither created nor altered the DNA and that Myriad’s only contribution was to isolate it. It further emphasized that the patents were not concerned with the mere chemical structure of the DNA but went to the underlying genetic information stored within it. However, the Court did find that the artificially created sections of cDNA were patent eligible. The Court found this to be true even though the methods employed in creating the cDNA were “well known in the field of genetics.” It rested its holding on the idea that the laboratory technician who created the cDNA had undoubtedly created something that was new and thus not a product of nature. The Court seemed to indicate that the mere act of synthetically replicating the DNA made the synthetic replications patent eligible. This case, and all those that came before it, formed the body of precedent that steered the Supreme Court’s decision in *Alice Corp. Pty. Ltd. v. CLS Bank International*.

**IV. INSTANT DECISION**

The Court began its discussion of the instant case by reiterating the policy considerations behind its previous decisions. It noted that the primary concern with the patenting of abstract ideas was one of “pre-emption.” These abstract ideas, the Court reasoned, were the basic “building blocks of human ingenuity,” and allowing them to be patented would do more harm than good by monopolizing the necessary tools for future development and preventing the innovation that the patent laws were designed to protect. However, the Court also noted that this concern had to be treated sparingly, because at a basic level nearly all inventions relied on laws of nature, natural phenomena, or abstract ideas in some way. Therefore, the Court concluded that it needed to establish a balance between those patents that tried to claim rights to basic concepts and those that applied those concepts to make something new.

Based on these policy concerns, the Court decided to adapt the test it had formally set out in *Mayo* regarding laws of nature and apply it to the con-

134. *Id.*
135. *Id.* at 2115.
136. *Id.* at 2118.
137. *Id.* at 2119.
138. *Id.* at 2112.
139. *Id.* at 2119.
141. *Id.*
142. *Id.*
143. *Id.*
144. *Id.*
cept of abstract ideas. The Court, this test consisted of two parts. First the Court asked, “Is there a claim relating to a patent-ineligible abstract idea?” If this question was answered in the affirmative, the next question became, “Is there anything more to the claim?” The Court described this test as “a search for an inventive concept,” a term it defined as some “element or combination of elements that is ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the [abstract idea] itself.’” The Court made clear that in making this determination, the claim elements in the patent had to be considered both individually and as a whole with an eye toward seeing if the claims “transformed” the abstract idea into something that could be patented.

The Court next applied this new test to the claims before it. The Court determined that the patents at issue were drawn to the idea of intermediate settlement, or the use of third parties to reduce settlement risk. The Court further noted that such an idea was fundamental to the practice of economics and had a long standing and use in our commercial system. It therefore concluded that the claim was, in fact, an abstract idea. The Court in large part based its conclusion on the strong parallels between these patents and the patents that were before it in Bilski. It concluded that there was “no meaningful distinction between the concept of risk hedging in Bilski and the concept of intermediate settlement” in the instant case, and consequently the result was the same as in Bilski.

Having made its determination that the patent in question represented an abstract idea, the Court then turned to the next question in the Mayo framework: “Is there anything more?” First, the Court noted that neither simply adding an instruction to apply an abstract idea nor limiting its use to a specific “technological environment” was enough to complete the transformation. The Court pointed out that combining these two ideas by including instructions to “apply it with a computer” equally failed. However, the

145. Id. at 2355.
146. Id.
147. Id.
148. Id.
149. Id. (quoting Mayo Collaborative Servs. v. Prometheus Labs., Inc., 132 S. Ct. 1289, 1294 (2012)).
150. Id.
151. Id.
152. Id. at 2356.
153. Id.
154. Id. at 2357.
155. Id. at 2356.
156. Id. at 2357.
157. Id.
158. Id. at 2358 (quoting Bilski v. Kappos, 561 U.S. 593, 610-11 (2010)).
159. Id.
Court concluded that this was exactly what the petitioners had done.\footnote{Id. at 2359.} The Court determined that each step of the patent did nothing more than “require a generic computer to perform generic computer functions” and that, when taken as a whole, the patent did nothing more than describe the process of intermediate settlement on a generic computer.\footnote{Id.} Having failed to find an “inventive concept” in the patent, the Court held that there was not enough to transform the idea from one that was abstract to one that would be patent eligible.\footnote{Id. at 2360.}

Because the petitioners in the case had attempted to patent not only the method but also the system and medium for doing so, the Court took a brief look at the system and medium claims.\footnote{Id. at 2351, 2360.} However, the Court determined that these claims failed for primarily the same reason.\footnote{Id. at 2360.} The Court noted that, similar to how the method claim amounted to nothing more than instructions to implement an abstract idea on a generic computer, the system claim was just a list of generic computer components configured to do the same thing.\footnote{Id. at 2360.} The petitioners had already conceded in the lower courts that the media claim was entirely dependent on the method claim.\footnote{Id. at 2360.} Having thus concluded that the patent in question claimed an abstract idea and little else, the Supreme Court affirmed the judgment of the Federal Circuit, holding the patent to be ineligible.\footnote{Id.}

V. Comment

In deciding the case of \textit{Alice}, the Supreme Court managed to finally provide a definitive test for cases where patents potentially claim abstract ideas. However, the Court’s decision leaves open some significant questions and potentially raises several new ones that will demand answers. First, what exactly constitutes an “abstract idea” given what the Court has said in this case and in its previous cases? Second, what is the full meaning of the Court’s “inventive concept” requirement? Finally, how are we to interpret this decision in light of the Supreme Court’s decision in \textit{Myriad}, which may significantly alter the Court’s requirement for “something more”?

\begin{itemize}
  \item \footnote{Id. at 2360-61 (Sotomayor, J., concurring).} Justice Sotomayor filed a brief concurrence, joined by Justice Ginsburg and Justice Breyer, that agreed with the majority’s holding that the patents contained an abstract idea and therefore were patent ineligible; however, Justice Sotomayor also sought to extend the holding to say that “business methods” were not a process under Section 101 and were therefore not patent eligible as a matter of statutory interpretation. \textit{Id.} at 2360-61 (Sotomayor, J., concurring).
\end{itemize}
A. What Is Abstract?

The Court refused to clearly answer the question of what exactly constitutes an abstract idea. In making its decision, it saw fit merely to rely on the strong similarities between the patent at stake in *Alice* and the one at stake in *Bilski*.

168 The Court directly refused to define the “precise contours of the abstract ideas category.”

169 However, while the Court refused to provide a definition, it did provide some important clues to help identify when something might be abstract. The Court focused on the long history of the use of clearinghouses in economic systems.

170 It cited to a scholarly article dating all the way back to 1896 and also referred to the use of these clearinghouses as being “a building block of the modern economy.”

171 Clearly, the Court’s focus was on both the length and breadth of the ideas being put forward. This echoes the Court’s longstanding concerns regarding preemption and is therefore not particularly surprising. What is somewhat surprising, however, is the way that both of these ideas are drawn to the concept of novelty. This is surprising because novelty is already a requirement for patent eligibility under Section 102.

173 Perhaps then, this phenomenon is best explained as the Court attempting to expand the concept of novelty beyond the requirement that the patent be novel as a whole and instead requiring that some significant portion of the underlying idea must also be novel. This may present something of a problem as it may lead some to misconstrue the Court’s intentions.

174 In any event, the long history and use language is what has currently played the most important factor in the lower courts that have been called upon to interpret *Alice*.

While the Court makes clear that this long history and use is a good indicator of an abstract idea, it has more difficulty squaring it away with some

168 *Id.* at 2357 (majority opinion).

169 *Id.* (internal quotation marks omitted).

170 *Id.* at 2356.

171 *Id.* (citing Emery, *Speculation on the Stock and Produce Exchanges of the United States, in 7 Studies in History, Economics and Public Law* 283, 346-56 (1896)).

172 *Id.*


174 See infra Part V.B.

175 See buySAFE, Inc. v. Google, Inc., 765 F.3d 1350, 1352, 1355 (Fed. Cir. 2014) (finding patent to be, at heart, a process for creating transaction performance guarantees which had a long history and use in financial market and thus declared it ineligible under Section 101); Cogent Med., Inc. v. Elsevier Inc., Nos. C-13-4479-RMW, C-13-4483, C-13-4486, 2014 WL 4966326 (N.D. Cal. Sept. 30, 2014) (finding patent went toward abstract idea of maintaining and searching a library for information, thereby making it ineligible under Section 101); Open Text S.A. v. Alfresco Software Ltd., 13-CV-04843-JD, 2014 WL 4684429 (N.D. Cal. Sept. 19, 2014) (finding patent went to the very old practice of interacting with customers to gain feedback and promote sales and that patent was ineligible under Section 101).
of its older decisions. For instance, the cases of *Morse* and *Benson* contained abstract ideas that would not fit comfortably within the long history and use terminology the Court laid down in this decision. Indeed, the patents in these cases contained underlying ideas that were new and innovative and had not been subject to either long history or use, yet the Court still found them to be abstract. However, there is nothing in the case that would seem to overtly contradict or overrule these decisions *sub silentio*. The Court specifically cites to both *Morse* and *Benson* for support in the case. 176 This conclusion is further buttressed by the Court’s use of the basic “building blocks” language that would suggest that it has no interest in abandoning these previous cases. 177 As discussed below, this may very well affect how the second half of the test is meant to be interpreted. 178 For now, it is sufficient to establish that both definitions – basic building blocks and long history and use – can be used for determining abstractness.

Another issue that deserves some attention is the question of the business method exception. The concurrence called for a holding that a business method claim could not constitute a process under the meaning of Section 101. 179 In other words, the concurrence would call for a ban on business methods being considered patent eligible. While the majority does not go that far, it is still questionable how much room this decision leaves for these types of patents. The Court’s long history and use language seems to extend beyond the older building blocks language to encapsulate not just ideas that are fundamental to scientific development, but also ideas that seek to improve upon common practices. In other words, by adopting this language it would appear that the Court has effectively sidestepped the business methods exception by allowing lower courts a new avenue for finding patent ineligibility without resorting to a direct ban. 180

**B. What Is an Inventive Concept?**

The second step in the Court’s new test is the quest for “something more,” the inventive concept requirement. 181 The Court has more to say about what does not constitute an inventive concept than what does. For instance, the Court focused on the idea that the implementation of a generic computer is not enough. 182 This by no means equates to a ban on the patent-
ing of software, as some had feared. However, it is definitely language that has been instrumental in the decisions of several lower courts that have invalidated patents on this ground. While this language formed the basis of the Court’s determination that the patents in question did not have an inventive concept beyond the ineligible abstract idea, it does not end the discussion of what an inventive concept actually is.

A more interesting question is how this inventive concept requirement differs from the requirement of novelty as set forth in Section 102. It can be argued that there is no difference and that the requirement for an inventive concept is just another way of requiring novelty. An alternative consideration is whether the inventive concept requirement intrudes on the obviousness requirement of Section 103. It is not unreasonable to argue that what is not inventive is obvious and thus, that this requirement does nothing more than restate the requirements of Section 102 and Section 103. At least some who have commented on the case have suggested that the inventive concept requirement does just that. But this understanding does not seem to square with what the Court had to say. It may well explain the decision in the immediate case where the patents in question did seem to lack novelty or were obvious.

However, this understanding creates a problem. If the inventive concept requirement does nothing more than duplicate the novelty or non-obvious requirements, then it could not explain the Court’s decisions in cases where the abstract idea rests at the point of novelty. This is the situation in cases like Morse and Benson where what was being claimed was not an improvement on an idea with a long history and use, but rather something relatively new. Considering Morse for example, the Court did not find the abstract idea unpatentable because of a lack of novelty or obviousness of the design, but rather out of a fear of preemption. It is this fear of preemption the Court wishes to address with the inventive concept requirement. The dictum of the majority’s opinion supports this conclusion when describing the search for an inventive concept to mean a search for some additional features that will en-


sure “the [claim] is more than a drafting effort designed to monopolize the [abstract idea].”\(^{189}\) Thus, the term “inventive concept” is deceptively misleading and masks the true nature of the test, which is a question of preemption.

This, of course, may create significant problems if lower courts fail to understand the Court’s dicta or consider the Court’s previous cases. If the lower courts place too much emphasis on the long history and use language for instance, and not the basic building blocks language of earlier Supreme Court decisions, they may repeat the mistake of earlier courts, such as those that read *Benson* as being a ban on patenting mathematical algorithms and nothing else. Those wishing to apply the test must therefore focus more on the idea of whether the patent in question risks preemption as opposed to whether the underlying idea is novel. It is worth mentioning that at least one case that has been decided since *Alice* on grounds similar to this has taken the Court’s considerations to heart and not fallen into this trap.\(^{190}\)

**C. Comparing Alice and Mayo with Myriad**

The cases of *Alice* and *Mayo* create a curious comparison with *Myriad* that is worthy of inquiry. In *Alice*, the Supreme Court specifically stated that the test it developed in *Mayo* was to apply to laws of nature, natural phenomena, and abstract ideas.\(^{191}\) In other words, the test developed in *Mayo* should have been the same for the cases of *Mayo*, *Myriad*, and *Alice*. Yet, it is questionable as to whether this actually occurred. In *Myriad*, the Court found that cDNA that coded for the exact same information as its DNA analog was patent eligible while the DNA itself was not.\(^{192}\) If the genetic information contained within the DNA was itself a product of nature, as the Court concluded, then the second part of the *Alice* test must be applied. Thus, it must be determined if there was any “inventive concept.” In other words, was there any

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190. In the case of *McRO, Inc. v. Atlas U.S.A.* and its siblings, for example, the court found the claims to be patent-ineligible abstract ideas despite the fact that they were in some ways novel. No. SACV 13-1870-GW FFMMX, 2014 WL 4772196, at *13 (C.D. Cal. Sept. 22, 2014). The claim in the case concerned a patent for 3D computer animation that involved connecting a character’s speech with the way his mouth was moving. *Id.* at *1-2*. The patent improved on previous methods for doing so by using a system of mathematical rules to automate a process that previously had to be carried out manually by an artist. *Id.* at *11*. The court based its considerations on the concern of preemption, holding that while the patents on their face may not seem abstract, they would preempt the use of a mathematical rule-based approach for automatic lip synchronization in 3D animation. *Id.* Thus, the court held them to be ineligible. *Id.* at *13.


indicator that the patent on the cDNA was more than a drafting attempt to patent the genetic code itself? As a purely factual matter, it would appear not; the cDNA differed only in the removal of the noncoding – and thus irrelevant – portions of the DNA, leaving the underlying genetic code intact. Therefore, the Court’s emphasis on the lab technician “unquestionably creat[ing] something new” seems misplaced considering that it acknowledges that it is the genetic information that Myriad sought to patent, which remained unchanged. Since it is the genetic information that is desirable, it is hard to say how the cDNA is anything more than a draftsman’s effort to monopolize the product of nature itself.

Given this seeming incongruity between the test adopted in *Alice* and the result in *Myriad*, what can be learned? It is possible that the results reached in these two cases are simply irreconcilable. The Supreme Court might have just used two different tests, despite what it claimed. When considering this, it is worth noting that the Court did not specifically adopt or indeed even address the *Mayo* test in *Myriad*, despite clearly having the opportunity to do so.194 Alternatively, these two decisions could be read as similar to the “Machine or Transformation” test developed by the Court of Appeals for the Federal Circuit in *Bilski*.195 There the court was focused on language adopted by the Supreme Court in *Diehr* that stated that “transforming or reducing an article to a different state of thing” was evidence of patent eligibility.196 The Supreme Court rejected “Machine or Transformation” as being the definitive test, but did acknowledge its use as an investigative tool in determining patent eligibility.197 Therefore, patent eligibility of abstract ideas may possibly be shown by emphasizing the way in which such ideas are used to transform material or data from one form to another as part of a novel process, even if there is some threat of preemption. While the inventive concept requirement is best read as a prohibition on preemption, the dicta in *Bilski* and the result in *Myriad* would seem to strongly suggest some degree of preemption is acceptable, provided some new material or data is produced as a result. Practitioners attempting to defend such patents may profit from emphasizing the analogy to the cDNA in *Myriad* that is patent eligible under the same test.

**VI. CONCLUSION**

The patent process provides important means of incentivizing the discovery and development of new ideas.198 Yet there must be some limit to what can patented, lest we risk stifling the market and preventing new dis-

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193. Id. at 2118-19.
195. In re Bilski, 545 F.3d 943, 954 (Fed. Cir. 2008).
196. Id.
198. NARD, supra note 194, at 2-3.
covery by removing the necessary starting points on which new ideas may be built. It is in this balance between the creation of monopolies over ideas to promote investment and protecting innovation by ensuring necessary tools are readily available that the common law patent eligibility exceptions become important. The case of *Alice Corp. Pty. Ltd. v. CLS Bank International* is an important milestone in the development of these exceptions. Faced with an ever-expanding and changing technological world, the Court devised a means by which the courts and the government may properly establish the limitations of the patent system. While the decision leaves open several questions, its dicta, combined with earlier precedents, may provide a good clue for helping the lower courts to adjudicate patent disputes in a sensible manner. To that end, it is necessary that the *Alice* decision be read in close connection with the Court’s previous decisions to prevent a repeat of some of the mistakes of the past.