

---

---

# *Part I*

## *Cases and Notes*

---

---



---

## 3 *Patent Law*

---

*Insert at p. 147, replacing the Federal Circuit decision in Bilski:*

===== ***Bilski v. Kappos, 2010 WL 2555192,***  
===== ***95 U.S.P.Q.2d 1001***  
===== ***(U.S. Sup. Ct., June 28, 2010)***

Justice KENNEDY delivered the opinion of the Court, except as to Parts II-B-2 and II-C-2. [Justice SCALIA does not join Parts II-B-2 and II-C-2.]

The question in this case turns on whether a patent can be issued for a claimed invention designed for the business world. The patent application claims a procedure for instructing buyers and sellers how to protect against the risk of price fluctuations in a discrete section of the economy. Three arguments are advanced for the proposition that the claimed invention is outside the scope of patent law: (1) it is not tied to a machine and does not transform an article; (2) it involves a method of conducting business; and (3) it is merely an abstract idea. The Court of Appeals ruled that the first mentioned of these, the so-called machine-or-transformation test, was the sole test to be used for determining the patentability of a “process” under the Patent Act, 35 U.S.C. §101.

### I.

Petitioners’ application seeks patent protection for a claimed invention that explains how buyers and sellers of commodities in the energy market can protect, or hedge, against the risk of price changes. The key claims are claims 1 and 4. Claim 1 describes a series of steps instructing how to hedge risk. Claim 4 puts the concept articulated in claim 1 into a simple mathematical formula. Claim 1 consists of the following steps:

“(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

### 3. Patent Law

based upon historical averages, said fixed rate corresponding to a risk position of said consumers;

“(b) identifying market participants for said commodity having a counter-risk position to said consumers; and

“(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.” App. 19-20.

The remaining claims explain how claims 1 and 4 can be applied to allow energy suppliers and consumers to minimize the risks resulting from fluctuations in market demand for energy. For example, claim 2 claims “[t]he method of claim 1 wherein said commodity is energy and said market participants are transmission distributors.” *Id.*, at 20. Some of these claims also suggest familiar statistical approaches to determine the inputs to use in claim 4’s equation. For example, claim 7 advises using well-known random analysis techniques to determine how much a seller will gain “from each transaction under each historical weather pattern.” *Id.*, at 21.

The patent examiner rejected petitioners’ application, explaining that it “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.” App. to Pet. for Cert. 148a. The Board of Patent Appeals and Interferences affirmed, concluding that the application involved only mental steps that do not transform physical matter and was directed to an abstract idea. *Id.*, at 181a-186a.

The United States Court of Appeals for the Federal Circuit heard the case en banc and affirmed. The case produced five different opinions. Students of patent law would be well advised to study these scholarly opinions.

Chief Judge Michel wrote the opinion of the court. The court rejected its prior test for determining whether a claimed invention was a patentable “process” under §101 — whether it produces a “‘useful, concrete, and tangible result’” — as articulated in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373 (1998), and *AT & T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1357 (1999). See *In re Bilski*, 545 F.3d 943, 959-960, and n. 19 (C.A. Fed. 2008) (en banc). The court held that “[a] claimed process is surely patent-eligible under §101 if: (1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.” *Id.*, at 954. The court concluded this “machine-or-transformation test” is “the sole test governing §101 analyses,” *id.*, at 955, and thus the “test for determining patent eligibility of a process under §101,” *id.*, at 956. Applying the machine-or-transformation test, the court held that petitioners’ application was not patent eligible. *Id.*, at 963-966. Judge Dyk wrote a separate concurring opinion, providing historical support for the court’s approach. *Id.*, at 966-976.

Three judges wrote dissenting opinions. Judge Mayer argued that petitioners’ application was “not eligible for patent protection because it is directed to a method of conducting business.” *Id.*, at 998. He urged the adoption of a “technological standard for patentability.” *Id.*, at 1010. Judge Rader would have found

### 3. Patent Law

petitioners' claims were an unpatentable abstract idea. *Id.*, at 1011. Only Judge Newman disagreed with the court's conclusion that petitioners' application was outside of the reach of §101. She did not say that the application should have been granted but only that the issue should be remanded for further proceedings to determine whether the application qualified as patentable under other provisions. *Id.*, at 997.

This Court granted certiorari. 556 U.S. \_\_\_, 129 S. Ct. 2735 (2009).

## II.

### A.

Section 101 defines the subject matter that may be patented under the Patent Act:

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.

Section 101 thus specifies four independent categories of inventions or discoveries that are eligible for protection: processes, machines, manufactures, and compositions of matter. "In choosing such expansive terms . . . modified by the comprehensive 'any,' Congress plainly contemplated that the patent laws would be given wide scope." *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980). Congress took this permissive approach to patent eligibility to ensure that "ingenuity should receive a liberal encouragement." *Id.*, at 308-309, 100 S. Ct. 2204 (quoting 5 Writings of Thomas Jefferson 75-76 (H. Washington ed. 1871)).

The Court's precedents provide three specific exceptions to §101's broad patent-eligibility principles: "laws of nature, physical phenomena, and abstract ideas." *Chakrabarty*, *supra*, at 309. While these exceptions are not required by the statutory text, they are consistent with the notion that a patentable process must be "new and useful." And, in any case, these exceptions have defined the reach of the statute as a matter of statutory *stare decisis* going back 150 years. See *Le Roy v. Tatham*, 14 How. 156, 174-175 (1853). The concepts covered by these exceptions are "part of the storehouse of knowledge of all men . . . free to all men and reserved exclusively to none." *Funk Brothers Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 130 (1948).

The §101 patent-eligibility inquiry is only a threshold test. Even if an invention qualifies as a process, machine, manufacture, or composition of matter, in order to receive the Patent Act's protection the claimed invention must also satisfy "the conditions and requirements of this title." §101. Those requirements include that the invention be novel, see §102, nonobvious, see §103, and fully and particularly described, see §112.

The present case involves an invention that is claimed to be a "process" under §101. Section 100(b) defines "process" as:

### 3. Patent Law

process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.

The Court first considers two proposed categorical limitations on “process” patents under §101 that would, if adopted, bar petitioners’ application in the present case: the machine-or-transformation test and the categorical exclusion of business method patents.

## B.

### 1.

Under the Court of Appeals’ formulation, an invention is a “process” only if: “(1) it is tied to a particular machine or apparatus, or (2) it transforms a particular article into a different state or thing.” 545 F.3d, at 954. This Court has “more than once cautioned that courts ‘should not read into the patent laws limitations and conditions which the legislature has not expressed.’” *Diamond v. Diehr*, 450 U.S. 175 (1981) (quoting *Chakrabarty*, *supra*, at 308, 100 S. Ct. 2204; some internal quotation marks omitted). In patent law, as in all statutory construction, “[u]nless otherwise defined, ‘words will be interpreted as taking their ordinary, contemporary, common meaning.’” *Diehr*, *supra*, at 182. The Court has read the §101 term “manufacture” in accordance with dictionary definitions, see *Chakrabarty*, *supra*, at 308, and approved a construction of the term “composition of matter” consistent with common usage, see *Chakrabarty*, *supra*, at 308.

Any suggestion in this Court’s case law that the Patent Act’s terms deviate from their ordinary meaning has only been an explanation for the exceptions for laws of nature, physical phenomena, and abstract ideas. See *Parker v. Flook*, 437 U.S. 584, 588-589 (1978). This Court has not indicated that the existence of these well-established exceptions gives the Judiciary *carte blanche* to impose other limitations that are inconsistent with the text and the statute’s purpose and design. Concerns about attempts to call any form of human activity a “process” can be met by making sure the claim meets the requirements of §101.

Adopting the machine-or-transformation test as the sole test for what constitutes a “process” (as opposed to just an important and useful clue) violates these statutory interpretation principles. Section 100(b) provides that “[t]he term ‘process’ means process, art or method, and includes a new use of a known process, machine, manufacture, composition of matter, or material.” The Court is unaware of any “‘ordinary, contemporary, common meaning,’” *Diehr*, *supra*, at 182, of the definitional terms “process, art or method” that would require these terms to be tied to a machine or to transform an article. Respondent urges the Court to look to the other patentable categories in §101 — machines, manufactures, and compositions of matter — to confine the meaning of “process” to a machine or transformation, under the doctrine of *noscitur a sociis*. Under this canon, “an ambiguous term may be given more precise content by the neighboring words with which it is

### 3. Patent Law

associated.” *United States v. Stevens*, 559 U.S. \_\_\_, \_\_\_, 130 S. Ct. 1577, 1587 (2010) (internal quotation marks omitted). This canon is inapplicable here, for §100(b) already explicitly defines the term “process.” See *Burgess v. United States*, 553 U.S. 124, 130 (2008) (“When a statute includes an explicit definition, we must follow that definition” (internal quotation marks omitted)).

The Court of Appeals incorrectly concluded that this Court has endorsed the machine-or-transformation test as the exclusive test. It is true that *Cochrane v. Deener*, 94 U.S. 780, 788 (1877), explained that a “process” is “an act, or a series of acts, performed upon the subject-matter to be transformed and reduced to a different state or thing.” More recent cases, however, have rejected the broad implications of this dictum; and, in all events, later authority shows that it was not intended to be an exhaustive or exclusive test. *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972), noted 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.” At the same time, it explicitly declined to “hold that no process patent could ever qualify if it did not meet [machine or transformation] requirements.” *Id.*, at 71. *Flook* took a similar approach, “assum[ing] that a valid process patent may issue even if it does not meet [the machine-or-transformation test].” 437 U.S., at 588, n. 9.

This Court’s precedents establish that the machine-or-transformation test is a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under §101. The machine-or-transformation test is not the sole test for deciding whether an invention is a patent-eligible “process.”

## 2.

It is true that patents for inventions that did not satisfy the machine-or-transformation test were rarely granted in earlier eras, especially in the Industrial Age, as explained by Judge Dyk’s thoughtful historical review. See 545 F.3d, at 966-976 (concurring opinion). But times change. Technology and other innovations progress in unexpected ways. For example, it was once forcefully argued that until recent times, “well-established principles of patent law probably would have prevented the issuance of a valid patent on almost any conceivable computer program.” *Diehr*, 450 U.S., at 195 (Stevens, J., dissenting). But this fact does not mean that unforeseen innovations such as computer programs are always unpatentable. See *id.*, at 192-193 (majority opinion) (holding a procedure for molding rubber that included a computer program is within patentable subject matter). Section 101 is a “dynamic provision designed to encompass new and unforeseen inventions.” *J.E.M. Ag Supply, Inc. v. Pioneer Hi-Bred Int’l, Inc.*, 534 U.S. 124, 135 (2001). A categorical rule denying patent protection for “inventions in areas not contemplated by Congress . . . would frustrate the purposes of the patent law.” *Chakrabarty*, 447 U.S., at 315.

The machine-or-transformation test may well provide a sufficient basis for evaluating processes similar to those in the Industrial Age—for example, inventions grounded in a physical or other tangible form. But there are reasons to doubt

### 3. Patent Law

whether the test should be the sole criterion for determining the patentability of inventions in the Information Age. As numerous *amicus* briefs argue, the machine-or-transformation test would create uncertainty as to the patentability of software, advanced diagnostic medicine techniques, and inventions based on linear programming, data compression, and the manipulation of digital signals. See, *e.g.*, Brief for Business Software Alliance 24-25; Brief for Biotechnology Industry Organization et al. 14-27; Brief for Boston Patent Law Association 8-15; Brief for Houston Intellectual Property Law Association 17-22; Brief for Dolby Labs., Inc., et al. 9-10.

In the course of applying the machine-or-transformation test to emerging technologies, courts may pose questions of such intricacy and refinement that they risk obscuring the larger object of securing patents for valuable inventions without transgressing the public domain. The dissent by Judge Rader refers to some of these difficulties. 545 F.3d, at 1015. As a result, in deciding whether previously unforeseen inventions qualify as patentable “process[es],” it may not make sense to require courts to confine themselves to asking the questions posed by the machine-or-transformation test. Section 101’s terms suggest that new technologies may call for new inquiries. See *Benson, supra*, at 71 (to “freeze process patents to old technologies, leaving no room for the revelations of the new, onrushing technology[,] . . . is not our purpose”).

It is important to emphasize that the Court today is not commenting on the patentability of any particular invention, let alone holding that any of the above-mentioned technologies from the Information Age should or should not receive patent protection. This Age puts the possibility of innovation in the hands of more people and raises new difficulties for the patent law. With ever more people trying to innovate and thus seeking patent protections for their inventions, the patent law faces a great challenge in striking the balance between protecting inventors and not granting monopolies over procedures that others would discover by independent, creative application of general principles. Nothing in this opinion should be read to take a position on where that balance ought to be struck.

## C.

### 1.

Section 101 similarly precludes the broad contention that the term “process” categorically excludes business methods. The term “method,” which is within §100 (b)’s definition of “process,” at least as a textual matter and before consulting other limitations in the Patent Act and this Court’s precedents, may include at least some methods of doing business. See, *e.g.*, Webster’s New International Dictionary 1548 (2d ed.1954) (defining “method” as “[a]n orderly procedure or process . . . regular way or manner of doing anything; hence, a set form of procedure adopted in investigation or instruction”). The Court is unaware of any argument that the



### 3. Patent Law

“ordinary, contemporary, common meaning,” *Diehr, supra*, at 182, of “method” excludes business methods. Nor is it clear how far a prohibition on business method patents would reach, and whether it would exclude technologies for conducting a business more efficiently. See, *e.g.*, Hall, Business and Financial Method Patents, Innovation, and Policy, 56 *Scottish J. Pol. Econ.* 443, 445 (2009) (“There is no precise definition of . . . business method patents”).

The argument that business methods are categorically outside of §101’s scope is further undermined by the fact that federal law explicitly contemplates the existence of at least some business method patents. Under 35 U.S.C. §273(b)(1), if a patent-holder claims infringement based on “a method in [a] patent,” the alleged infringer can assert a defense of prior use. For purposes of this defense alone, “method” is defined as “a method of doing or conducting business.” §273(a)(3). In other words, by allowing this defense the statute itself acknowledges that there may be business method patents. Section 273’s definition of “method,” to be sure, cannot change the meaning of a prior-enacted statute. But what §273 does is clarify the understanding that a business method is simply one kind of “method” that is, at least in some circumstances, eligible for patenting under §101.

A conclusion that business methods are not patentable in any circumstances would render §273 meaningless. This would violate the canon against interpreting any statutory provision in a manner that would render another provision superfluous. See *Corley v. United States*, 556 U.S. \_\_\_, \_\_\_, 129 S. Ct. 1558 (2009). This principle, of course, applies to interpreting any two provisions in the U.S. Code, even when Congress enacted the provisions at different times. See, *e.g.*, *Hague v. Committee for Industrial Organization*, 307 U.S. 496, 529-530 (1939) (opinion of Stone, J.). This established rule of statutory interpretation cannot be overcome by judicial speculation as to the subjective intent of various legislators in enacting the subsequent provision. Finally, while §273 appears to leave open the possibility of some business method patents, it does not suggest broad patentability of such claimed inventions.

## 2.

Interpreting §101 to exclude all business methods simply because business method patents were rarely issued until modern times revives many of the previously discussed difficulties. See *supra*, at \_\_\_. At the same time, some business method patents raise special problems in terms of vagueness and suspect validity. See *eBay Inc. v. MercExchange, L.L. C.*, 547 U.S. 388, 397 (2006) (Kennedy, J., concurring). The Information Age empowers people with new capacities to perform statistical analyses and mathematical calculations with a speed and sophistication that enable the design of protocols for more efficient performance of a vast number of business tasks. If a high enough bar is not set when considering patent applications of this sort, patent examiners and courts could be flooded with claims that would put a chill on creative endeavor and dynamic change.

### 3. Patent Law

In searching for a limiting principle, this Court's precedents on the unpatentability of abstract ideas provide useful tools. See *infra*, at \_\_\_\_ – \_\_\_\_\_. Indeed, if the Court of Appeals were to succeed in defining a narrower category or class of patent applications that claim to instruct how business should be conducted, and then rule that the category is unpatentable because, for instance, it represents an attempt to patent abstract ideas, this conclusion might well be in accord with controlling precedent. See *ibid.* But beyond this or some other limitation consistent with the statutory text, 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 patentable subject matter under §101.

Finally, even if a particular business method fits into the statutory definition of a “process,” that does not mean that the application claiming that method should be granted. In order to receive patent protection, any claimed invention must be novel, §102, nonobvious, §103, and fully and particularly described, §112. These limitations serve a critical role in adjusting the tension, ever present in patent law, between stimulating innovation by protecting inventors and impeding progress by granting patents when not justified by the statutory design.

## III.

Even though petitioners' application is not categorically outside of §101 under the two broad and atextual approaches the Court rejects today, that does not mean it is a “process” under §101. Petitioners seek to patent both the concept of hedging risk and the application of that concept to energy markets. App. 19-20. Rather than adopting categorical rules that might have wide-ranging and unforeseen impacts, the Court resolves this case narrowly on the basis of this Court's decisions in *Benson*, *Flook*, and *Diehr*, which show that petitioners' claims are not patentable processes because they are attempts to patent abstract ideas. Indeed, all members of the Court agree that the patent application at issue here falls outside of §101 because it claims an abstract idea.

In *Benson*, the Court considered whether a patent application for an algorithm to convert binary-coded decimal numerals into pure binary code was a “process” under §101. 409 U.S., at 64-67. The Court first explained that “[a] principle, in the abstract, is a fundamental truth; an original cause; a motive; these cannot be patented, as no one can claim in either of them an exclusive right.” *Id.*, at 67, 93 S. Ct. 253 (quoting *Le Roy*, 14 How., at 175). The Court then held the application at issue was not a “process,” but an unpatentable abstract idea. “It is conceded that one may not patent an idea. But in practical effect that would be the result if the formula for converting . . . numerals to pure binary numerals were patented in this case.” 409 U.S., at 71, 93 S. Ct. 253. A contrary holding “would wholly preempt the mathematical formula and in practical effect would be a patent on the algorithm itself.” *Id.*, at 72.

In *Flook*, the Court considered the next logical step after *Benson*. The applicant there attempted to patent a procedure for monitoring the conditions during

### 3. Patent Law

the catalytic conversion process in the petrochemical and oil-refining industries. The application's only innovation was reliance on a mathematical algorithm. 437 U.S., at 585-586. *Flook* held the invention was not a patentable "process." The Court conceded the invention at issue, unlike the algorithm in *Benson*, had been limited so that it could still be freely used outside the petrochemical and oil-refining industries. 437 U.S., at 589-590. Nevertheless, *Flook* rejected "[t]he notion that post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process." *Id.*, at 590. The Court concluded that the process at issue there was "unpatentable under §101, not because it contain[ed] a mathematical algorithm as one component, but because once that algorithm [wa]s assumed to be within the prior art, the application, considered as a whole, contain[ed] no patentable invention." *Id.*, at 594. As the Court later explained, *Flook* stands for the proposition that the prohibition against patenting abstract ideas "cannot be circumvented by attempting to limit the use of the formula to a particular technological environment" or adding "insignificant postsolution activity." *Diehr*, 450 U.S., at 191-192.

Finally, in *Diehr*, the Court established a limitation on the principles articulated in *Benson* and *Flook*. The application in *Diehr* claimed a previously unknown method for "molding raw, uncured synthetic rubber into cured precision products," using a mathematical formula to complete some of its several steps by way of a computer. 450 U.S., at 177. *Diehr* explained that while an abstract idea, law of nature, or mathematical formula could not be patented, "an *application* of a law of nature or mathematical formula to a known structure or process may well be deserving of patent protection." *Id.*, at 187. *Diehr* emphasized the need to consider the invention as a whole, rather than "dissect[ing] the claims into old and new elements and then . . . ignor[ing] the presence of the old elements in the analysis." *Id.*, at 188. Finally, the Court concluded that because the claim was not "an attempt to patent a mathematical formula, but rather [was] an industrial process for the molding of rubber products," it fell within §101's patentable subject matter. *Id.*, at 192-193.

In light of these precedents, it is clear that petitioners' application is not a patentable "process." Claims 1 and 4 in petitioners' application explain the basic concept of hedging, or protecting against risk: "Hedging is a fundamental economic practice long prevalent in our system of commerce and taught in any introductory finance class." 545 F.3d, at 1013 (Rader, J., dissenting); see, e.g., D. Chorafas, *Introduction to Derivative Financial Instruments* 75-94 (2008); C. Stickney, R. Weil, K. Schipper, & J. Francis, *Financial Accounting: An Introduction to Concepts, Methods, and Uses* 581-582 (13th ed.2010); S. Ross, R. Westerfield, & B. Jordan, *Fundamentals of Corporate Finance* 743-744 (8th ed. 2008). The concept of hedging, described in claim 1 and reduced to a mathematical formula in claim 4, is an unpatentable abstract idea, just like the algorithms at issue in *Benson* and *Flook*. Allowing petitioners to patent risk hedging would preempt use of this approach in all fields, and would effectively grant a monopoly over an abstract idea.

Petitioners' remaining claims are broad examples of how hedging can be used in commodities and energy markets. *Flook* established that limiting an abstract

### 3. Patent Law

idea to one field of use or adding token postsolution components did not make the concept patentable. That is exactly what the remaining claims in petitioners' application do. These claims attempt to patent the use of the abstract idea of hedging risk in the energy market and then instruct the use of well-known random analysis techniques to help establish some of the inputs into the equation. Indeed, these claims add even less to the underlying abstract principle than the invention in *Flook* did, for the *Flook* invention was at least directed to the narrower domain of signaling dangers in operating a catalytic converter.

\* \* \*

Today, the Court once again declines to impose limitations on the Patent Act that are inconsistent with the Act's text. The patent application here can be rejected under our precedents on the unpatentability of abstract ideas. The Court, therefore, need not define further what constitutes a patentable "process," beyond pointing to the definition of that term provided in §100(b) and looking to the guideposts in *Benson*, *Flook*, and *Diehr*.

And nothing in today's opinion should be read as endorsing interpretations of §101 that the Court of Appeals for the Federal Circuit has used in the past. *See, e.g., State Street*, 149 F.3d, at 1373; *AT & T Corp.*, 172 F.3d, at 1357. It may be that the Court of Appeals thought it needed to make the machine-or-transformation test exclusive precisely because its case law had not adequately identified less extreme means of restricting business method patents, including (but not limited to) application of our opinions in *Benson*, *Flook*, and *Diehr*. In disapproving an exclusive machine-or-transformation test, we by no means foreclose the Federal Circuit's development of other limiting criteria that further the purposes of the Patent Act and are not inconsistent with its text.

The judgment of the Court of Appeals is affirmed.

*It is so ordered.*

Justice STEVENS, with whom Justice GINSBURG, Justice BREYER, and Justice SOTOMAYOR join, concurring in the judgment.

In the area of patents, it is especially important that the law remain stable and clear. The only question presented in this case is whether the so-called machine-or-transformation test is the exclusive test for what constitutes a patentable "process" under 35 U.S.C. §101. It would be possible to answer that question simply by holding, as the entire Court agrees, that although the machine-or-transformation test is reliable in most cases, it is not the *exclusive* test.

I agree with the Court that, in light of the uncertainty that currently pervades this field, it is prudent to provide further guidance. But I would take a different approach. Rather than making any broad statements about how to define the term "process" in §101 or tinkering with the bounds of the category of unpatentable, abstract ideas, I would restore patent law to its historical and constitutional moorings.

For centuries, it was considered well established that a series of steps for conducting business was not, in itself, patentable. In the late 1990's, the Federal

### 3. Patent Law

Circuit and others called this proposition into question. Congress quickly responded to a Federal Circuit decision with a stopgap measure designed to limit a potentially significant new problem for the business community. It passed the First Inventors Defense Act of 1999 (1999 Act), 113 Stat. 1501A-555 (codified at 35 U.S.C. §273), which provides a limited defense to claims of patent infringement, see §273(b), for “method[s] of doing or conducting business,” §273(a)(3). Following several more years of confusion, the Federal Circuit changed course, overruling recent decisions and holding that a series of steps may constitute a patentable process only if it is tied to a machine or transforms an article into a different state or thing. This “machine-or-transformation test” excluded general methods of doing business as well as, potentially, a variety of other subjects that could be called processes.

The Court correctly holds that the machine-or-transformation test is not the sole test for what constitutes a patentable process; rather, it is a critical clue. But the Court is quite wrong, in my view, to suggest that any series of steps that is not itself an abstract idea or law of nature may constitute a “process” within the meaning of §101. The language in the Court’s opinion to this effect can only cause mischief. The wiser course would have been to hold that petitioners’ method is not a “process” because it describes only a general method of engaging in business transactions — and business methods are not patentable. More precisely, although a process is not patent-ineligible simply because it is useful for conducting business, a claim that merely describes a method of doing business does not qualify as a “process” under §101.

[In Part I of his concurrence, Justice Stevens recounts the procedural history of the case.]

## II.

Before explaining in more detail how I would decide this case, I will comment briefly on the Court’s opinion. The opinion is less than pellucid in more than one respect, and, if misunderstood, could result in confusion or upset settled areas of the law. Three preliminary observations may be clarifying.

First, the Court suggests that the terms in the Patent Act must be read as lay speakers use those terms, and not as they have traditionally been understood in the context of patent law. *See, e.g., ante*, at \_\_\_ (terms in §101 must be viewed in light of their “‘ordinary, contemporary, common meaning’”); *ante*, at \_\_\_ (patentable “method” is any “orderly procedure or process,” “regular way or manner of doing anything,” or “set form of procedure adopted in investigation or instruction” (internal quotation marks omitted)). As I will explain at more length in Part III, *infra*, if this portion of the Court’s opinion were taken literally, the results would be absurd: Anything that constitutes a series of steps would be patentable so long as it is novel, nonobvious, and described with specificity. But the opinion cannot be taken literally on this point. The Court makes this clear when it accepts that the “atextual” machine-or-transformation test, *ante*, at \_\_\_, is “useful and important,” *ante*, at \_\_\_, even though it “violates” the stated “statutory interpretation principles,” *ante*, at \_\_\_; and when the Court excludes processes that tend to pre-empt commonly used ideas, see *ante*, at \_\_\_ – \_\_\_.

### 3. Patent Law

Second, in the process of addressing the sole issue presented to us, the opinion uses some language that seems inconsistent with our centuries-old reliance on the machine-or-transformation criteria as clues to patentability. Most notably, the opinion for a plurality suggests that these criteria may operate differently when addressing technologies of a recent vintage. See *ante*, at \_\_\_ – \_\_\_ (machine-or-transformation test is useful “for evaluating processes similar to those in the Industrial Age,” but is less useful “for determining the patentability of inventions in the Information Age”). In moments of caution, however, the opinion for the Court explains—correctly—that the Court is merely restoring the law to its historical state of rest. See *ante*, at \_\_\_ (“This Court’s precedents establish that the machine-or-transformation test is a useful and important clue, an investigative tool, for determining whether some claimed inventions are processes under §101”). Notwithstanding this internal tension, I understand the Court’s opinion to hold only that the machine-or-transformation test remains an important test for patentability. Few, if any, processes cannot effectively be evaluated using these criteria.

Third, in its discussion of an issue not contained in the questions presented—whether the particular series of steps in petitioners’ application is an abstract idea—the Court uses language that could suggest a shift in our approach to that issue. Although I happen to agree that petitioners seek to patent an abstract idea, the Court does not show how this conclusion follows “clear[ly],” *ante*, at \_\_\_, from our case law. The patent now before us is not for “[a] principle, in the abstract,” or a “fundamental truth.” *Parker v. Flook*, 437 U.S. 584, 589 (1978) (internal quotation marks omitted). Nor does it claim the sort of phenomenon of nature or abstract idea that was embodied by the mathematical formula at issue in *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972), and in *Flook*.

The Court construes petitioners’ claims on processes for pricing as claims on “the basic concept of hedging, or protecting against risk,” *ante*, at \_\_\_, and thus discounts the application’s discussion of what sorts of data to use, and how to analyze those data, as mere “token postsolution components,” *ante*, at \_\_\_. In other words, the Court artificially limits petitioners’ claims to hedging, and then concludes that hedging is an abstract idea rather than a term that describes a category of processes including petitioners’ claims. Why the Court does this is never made clear. One might think that the Court’s analysis means that any process that utilizes an abstract idea is *itself* an unpatentable, abstract idea. But we have never suggested any such rule, which would undermine a host of patentable processes. It is true, as the Court observes, that petitioners’ application is phrased broadly. See *ante*, at \_\_\_ — \_\_\_. But claim specification is covered by §112, not §101; and if a series of steps constituted an unpatentable idea merely because it was described without sufficient specificity, the Court could be calling into question some of our own prior decisions.<sup>1</sup> At points, the opinion suggests that novelty

---

1. For example, a rule that broadly-phrased claims cannot constitute patentable processes could call into question our approval of Alexander Graham Bell’s famous fifth claim on “[t]he method of, and apparatus for, transmitting vocal or other sounds telegraphically, as herein described, by causing electrical undulations, similar in form to the vibrations of the air accompanying the said vocal or other sounds, substantially as set forth,” *The Telephone Cases*, 126 U.S. 1, 531 (1888).

### 3. Patent Law

is the clue. See *ante*, at \_\_\_\_\_. But the fact that hedging is “long prevalent in our system of commerce,” *ibid.*, cannot justify the Court’s conclusion, as “the proper construction of §101 . . . does not involve the familiar issu[e] of novelty” that arises under §102. *Flook*, 437 U.S., at 588. At other points, the opinion for a plurality suggests that the analysis turns on the category of patent involved. See, *e.g.*, *ante*, at \_\_\_\_ (courts should use the abstract-idea rule as a “too [l]” to set “a high enough bar” “when considering patent applications of this sort”). But we have never in the past suggested that the inquiry varies by subject matter.

The Court, in sum, never provides a satisfying account of what constitutes an unpatentable abstract idea. Indeed, the Court does not even explain if it is using the machine-or-transformation criteria. The Court essentially asserts its conclusion that petitioners’ application claims an abstract idea. This mode of analysis (or lack thereof) may have led to the correct outcome in this case, but it also means that the Court’s musings on this issue stand for very little.

## III.

I agree with the Court that the text of §101 must be the starting point of our analysis. As I shall explain, however, the text must not be the end point as well.

Section 101 undoubtedly defines in “expansive terms” the subject matter eligible for patent protection, as the statute was meant to ensure that “‘ingenuit [ies] receive a liberal encouragement.’” *Diamond v. Chakrabarty*, 447 U.S. 303, 308-309 (1980). Nonetheless, not every new invention or discovery may be patented. Certain things are “free for all to use.” *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151 (1989).

The text of the Patent Act does not on its face give much guidance about what constitutes a patentable process. The statute defines the term “process” as a “process, art or method [that] includes a new use of a known process, machine, manufacture, composition of matter, or material.” §100(b). But, this definition is not especially helpful, given that it also uses the term “process” and is therefore somewhat circular.

As lay speakers use the word “process,” it constitutes any series of steps. But it has always been clear that, as used in §101, the term does not refer to a “‘process’ in the ordinary sense of the word,” *Flook*, 437 U.S., at 588; see also *Corning v. Burden*, 15 How. 252, 268 (1854) (“[T]he term process is often used in a more vague sense, in which it cannot be the subject of a patent”). Rather, as discussed in some detail in Part IV, *infra*, the term “process” (along with the definitions given to that term) has long accumulated a distinctive meaning in patent law. When the term was used in the 1952 Patent Act, it was neither intended nor understood to encompass *any* series of steps or *any way* to do *any thing*.

With that understanding in mind, the Government has argued that because “a word” in a statute “is given more precise content by the neighboring words with which it” associates, *United States v. Williams*, 553 U.S. 285, 294 (2008), we may draw inferences from the fact that “[t]he other three statutory categories of



### 3. Patent Law

patent-eligible subject matter identified in Section 101 — ‘machine, manufacture, or composition of matter’ — all ‘are things made by man, and involve technology.’” Brief for Respondent 26. Specifically, the Government submits, we may infer “that the term ‘process’ is limited to technological and industrial methods.” *Ibid.* The Court rejects this submission categorically, on the ground that “§100(b) already explicitly defines the term ‘process.’” *Ante*, at \_\_\_\_\_. But §100(b) defines the term “process” by using the term “process,” as well as several other general terms. This is not a case, then, in which we must *either* “follow” a definition, *ante*, at \_\_\_\_, *or* rely on neighboring words to understand the scope of an ambiguous term. The definition itself contains the very ambiguous term that we must define.

In my view, the answer lies in between the Government’s and the Court’s positions: The terms adjacent to “process” in §101 provide a clue as to its meaning, although not a very strong clue. Section 101’s list of categories of patentable subject matter is phrased in the disjunctive, suggesting that the term “process” has content distinct from the other items in the list. It would therefore be illogical to “rob” the word “process” of all independent meaning. Moreover, to the extent we can draw inferences about what is a “process” from common attributes in §101, it is a dangerous endeavor to do so on the basis of a perceived overarching theme. Given the many moving parts at work in the Patent Act, there is a risk of merely confirming our preconceived notions of what should be patentable or of seeing common attributes that track “the familiar issues of novelty and obviousness” that arise under other sections of the statute but are not relevant to §101, *Flook*, 437 U. S., at 588. The placement of “process” next to other items thus cannot prove that the term is limited to any particular categories; it does, however, give reason to be skeptical that the scope of a patentable “process” extends to cover any series of steps at all.

The Court makes a more serious interpretive error. As briefly discussed in Part II, *supra*, the Court at points appears to reject the well-settled proposition that the term “process” in §101 is not a “‘process’ in the ordinary sense of the word,” *Flook*, 437 U.S., at 588. Instead, the Court posits that the word “process” must be understood in light of its “ordinary, contemporary, common meaning,” *ante*, at \_\_\_\_\_ (internal quotation marks omitted). Although this is a fine approach to statutory interpretation in general, it is a deeply flawed approach to a statute that relies on complex terms of art developed against a particular historical background.<sup>2</sup> Indeed, the approach would render §101 almost comical. A process for training a dog, a series of dance steps, a method of shooting a basketball, maybe even words, stories, or songs if framed as the steps of typing letters or uttering sounds—all would be patent-eligible. I am confident that the term “process” in §101 is not nearly so capacious.

So is the Court, perhaps. What is particularly incredible about the Court’s stated method of interpreting §101 (other than that the method itself may be

---

2. For example, if this Court were to interpret the Sherman Act according to the Act’s plain text, it could prohibit “the entire body of private contract,” *National Soc. of Professional Engineers v. United States*, 435 U.S. 679, 688 (1978).



### 3. Patent Law

patent-eligible under the Court's theory of §101) is that the Court deviates from its own professed commitment to "ordinary, contemporary, common meaning." As noted earlier, the Court accepts a role for the "atextual" machine-or-transformation "clue." *Ante*, at \_\_\_, \_\_\_. The Court also accepts that we have "foreclose[d] a purely literal reading of §101," *Flook*, 437 U.S., at 589, by holding that claims that are close to "laws of nature, natural phenomena, and abstract ideas," *Diamond v. Diehr*, 450 U.S. 175, 185 (1981), do not count as "processes" under §101, even if they can be colloquially described as such. The Court attempts to justify this latter exception to §101 as "a matter of statutory *stare decisis*." *Ante*, at \_\_\_. But it is strange to think that the very same term must be interpreted literally on some occasions, and in light of its historical usage on others.

In fact, the Court's understanding of §101 is even more remarkable because its willingness to *exclude* general principles from the provision's reach is in tension with its apparent willingness to *include* steps for conducting business. The history of patent law contains strong norms against patenting these two categories of subject matter. Both norms were presumably incorporated by Congress into the Patent Act in 1952.

## IV.

Because the text of §101 does not on its face convey the scope of patentable processes, it is necessary, in my view, to review the history of our patent law in some detail. This approach yields a much more straightforward answer to this case than the Court's. As I read the history, it strongly supports the conclusion that a method of doing business is not a "process" under §101.

I am, of course, mindful of the fact that §101 "is a dynamic provision designed to encompass new and unforeseen inventions," and that one must therefore view historical conceptions of patent-eligible subject matter at an appropriately high level of generality. *J.E.M. Ag Supply*, 534 U.S., at 135. But it is nonetheless significant that while people have long innovated in fields of business, methods of doing business fall outside of the subject matter that has "historically been eligible to receive the protection of our patent laws," *Diehr*, 450 U.S., at 184, and likely go beyond what the modern patent "statute was enacted to protect," *Flook*, 437 U.S., at 593. It is also significant that when Congress enacted the latest Patent Act, it did so against the background of a well-settled understanding that a series of steps for conducting business cannot be patented. These considerations ought to guide our analysis. As Justice Holmes noted long ago, sometimes, "a page of history is worth a volume of logic." *New York Trust Co. v. Eisner*, 256 U.S. 345, 349 (1921).

### ***English Backdrop***

The Constitution's Patent Clause was written against the "backdrop" of English patent practices, *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 5 (1966),

### 3. Patent Law

and early American patent law was “largely based on and incorporated” features of the English patent system, E. Walterscheid, *To Promote the Progress of Useful Arts: American Patent Law and Administration, 1789-1836*, p. 109 (1998) (hereinafter Walterscheid, *To Promote the Progress*). The governing English law, the Statute of Monopolies, responded to abuses whereby the Crown would issue letters patent, “granting monopolies to court favorites in goods or businesses which had long before been enjoyed by the public.” *Graham*, 383 U.S., at 5.

Although it is difficult to derive a precise understanding of what sorts of methods were patentable under English law, there is no basis in the text of the Statute of Monopolies, nor in pre-1790 English precedent, to infer that business methods could qualify. There was some debate throughout the relevant time period about what processes could be patented. But it does not appear that anyone seriously believed that one could patent “a method for organizing human activity.” 545 F.3d, at 970 (Dyk, J., concurring). [From footnote: See also Pollack, *The Multiple Unconstitutionality of Business Method Patents: Common Sense, Congressional Consideration, and Constitutional History*, 28 Rutgers Computer & Tech. L.J. 61, 94-96 (2002) (hereinafter Pollack) (describing English practice).].

There were a small number of patents issued between 1623 and 1790 relating to banking or lotteries and one for a method of life insurance, but these did not constitute the “prevail[ing]” “principles and practice” in England on which our patent law was based, *Pennock v. Dialogue*, 2 Pet. 1, 18 (1829). Such patents were exceedingly rare, and some of them probably were viewed not as inventions or discoveries but rather as special state privileges that until the mid-1800’s were recorded alongside inventions in the patent records, see [C. MacLeod, *Inventing the Industrial Revolution: The English Patent System, 1660-1800* (1988), at pp. 1-2] (explaining that various types of patents were listed together). It appears that the only English patent of the time that can fairly be described as a business method patent was one issued in 1778 on a “Plan for assurances on lives of persons from 10 to 80 years of Age.” Woodcroft 324. And “[t]here is no indication” that this patent “was ever enforced or its validity tested,” 545 F.3d, at 974 (Dyk, J., concurring); the patent may thus have represented little more than the whim—or error—of a single patent clerk.

In any event, these patents (or patent) were probably not known to the Framers of early patent law. In an era before computerized databases, organized case law, and treatises, the American drafters probably would have known about particular patents only if they were well publicized or subject to reported litigation. So far as I am aware, no published cases pertained to patents on business methods.

Also noteworthy is what was *not* patented under the English system. During the 17th and 18th centuries, Great Britain saw innovations in business organization, business models, management techniques, and novel solutions to the challenges of operating global firms in which subordinate managers could be reached only by a long sea voyage. Few if any of these methods of conducting business were patented. [citing Pollack 97-100 and other sources, including Ronald Harris, *The Bubble Act: Its Passage and its Effects on Business Organization*, 54 J. Econ. Hist. 610, 624-625 (1994)].

### 3. Patent Law

#### *Early American Patent Law*

At the Constitutional Convention, the Founders decided to give Congress a patent power so that it might “promote the Progress of . . . useful Arts.” Art. I, §8, cl. 8. There is little known history of that Clause. We do know that the Clause passed without objection or debate. This is striking because other proposed powers, such as a power to grant charters of incorporation, generated discussion about the fear that they might breed “monopolies.” Indeed, at the ratification conventions, some States recommended amendments that would have prohibited Congress from granting “exclusive advantages of commerce.” If the original understanding of the Patent Clause included the authority to patent methods of doing business, it might not have passed so quietly.

In 1790, Congress passed the first Patent Act. . . . [W]e know that the term “useful arts” was used in the founding era to refer to manufacturing and similar applied trades. See . . . Thomas, *The Patenting of the Liberal Professions*, 40 *Boston College L. Rev.* 1139, 1164 (1999) (“[The Framers of the Constitution] undoubtedly contemplated the industrial, mechanical and manual arts of the late eighteenth Century, in contrast to the seven ‘liberal arts’ and the four ‘fine arts’ of classical learning”). Indeed, just days before the Constitutional Convention, one delegate listed examples of American progress in “manufactures and the useful arts,” all of which involved the creation or transformation of physical substances. See T. Coxe, *An Address to an Assembly of the Friends of American Manufactures* 17-18 (1787) (listing, *inter alia*, meal, ships, liquors, potash, gunpowder, paper, starch, articles of iron, stone work, carriages, and harnesses). Numerous scholars have suggested that the term “useful arts” was widely understood to encompass the fields that we would now describe as relating to technology or “technological arts.” [Citing, *inter alia*, Samuelson, *Benson Revisited: The Case Against Patent Protection for Algorithms and Other Computer-Related Inventions*, 39 *Emory L.J.* 1025, 1033, n. 24 (1990).]

Thus, fields such as business and finance were not generally considered part of the “useful arts” in the founding Era. See, e.g., *The Federalist* No. 8, p. 69 (C. Rossiter ed. 1961) (A. Hamilton) (distinguishing between “the arts of industry, and the science of finance”); 30 *The Writings of George Washington 1745-1799*, p. 186 (J. Fitzpatrick ed. 1939) (writing in a letter that “our commerce has been considerably curtailed,” but “the useful arts have been almost imperceptible pushed to a considerable degree of perfection”). Indeed, the same delegate to the Constitutional Convention who gave an address in which he listed triumphs in the useful arts distinguished between those arts and the conduct of business. He explained that investors were now attracted to the “manufactures and the useful arts,” much as they had long invested in “commerce, navigation, stocks, banks, and insurance companies.” T. Coxe, *A Statement of the Arts and Manufactures of the United States of America for the Year 1810*, (1814), in 2 *American State Papers*, Finance 666, 688 (1832).

Some scholars have remarked, as did Thomas Jefferson, that early patent statutes neither included nor reflected any serious debate about the precise scope of patentable subject matter. See, e.g., *Graham*, 383 U.S., at 9-10, 86 S. Ct.

684 (discussing Thomas Jefferson’s observations). It has been suggested, however, that “[p]erhaps this was in part a function of an understanding—shared widely among legislators, courts, patent office officials, and inventors—about what patents were meant to protect. Everyone knew that manufactures and machines were at the core of the patent system.” Merges, *Property Rights for Business Concepts and Patent System Reform*, 14 *Berkeley Tech. L.J.* 577, 585 (1999) (hereinafter Merges). Thus, although certain processes, such as those related to the technology of the time, might have been considered patentable, it is possible that “[a]gainst this background, it would have been seen as absurd for an entrepreneur to file a patent” on methods of conducting business. *Ibid.*

#### ***Development of American Patent Law***

During the first years of the patent system, no patents were issued on methods of doing business. Indeed, for some time, there were serious doubts as to “the patentability of processes per se,” as distinct from the physical end product or the tools used to perform a process. *Id.*, at 581-582.

Although courts occasionally struggled with defining what was a patentable “art” during those 160 years, they consistently rejected patents on methods of doing business. The rationales for those decisions sometimes varied. But there was an overarching theme, at least in dicta: Business methods are not patentable arts. See, e.g., *United States Credit Sys. Co. v. American Credit Indem. Co.*, 53 F. 818, 819 (CCSDNY 1893) (“method of insuring against loss by bad debts” could not be patented “as an art”); *Hotel Security Checking Co. v. Lorraine Co.*, 160 F. 467, 469 (C.A.2 1908) (“A system of transacting business disconnected from the means for carrying out the system is not, within the most liberal interpretation of the term, an art”); *Guthrie v. Curlett*, 10 F.2d 725, 726 (C.A.2 1926) (method of abbreviating rail tariff schedules, “if it be novel, is not the kind of art protected by the patent acts”); *In re Patton*, 127 F.2d 324, 327-328 (CCPA 1942) (holding that novel “interstate and national fire-fighting system” was not patentable because, *inter alia*, “a system of transacting business, apart from the means for carrying out such system is not” an art within the meaning of the patent law, “nor is an abstract idea or theory, regardless of its importance or . . . ingenuity”); *Loew’s Drive-in Theatres, Inc. v. Park-in Theatres, Inc.*, 174 F.2d 547, 552 (C.A.1 1949) (“[A] system for the transaction of business, such, for example, as the cafeteria system for transacting the restaurant business . . . however novel, useful, or commercially successful is not patentable apart from the means for making the system practically useful, or carrying it out”); *Joseph E. Seagram & Sons, Inc. v. Marzall*, 180 F.2d 26, 28 (C.A.D.C.1950) (method of focus-group testing for beverages is not patentable subject matter); see also *In re Howard*, 55 C.C.P.A. 1121, 394 F.2d 869, 872 (CCPA 1968) (Kirkpatrick, J., concurring) (explaining that a “method of doing business” cannot be patented). Between 1790 and 1952, this Court never addressed the patentability of business methods. But we consistently focused the inquiry on whether an “art” was connected to a machine or physical transformation, an inquiry that would have excluded methods of doing business.

### 3. Patent Law

By the early 20th century, it was widely understood that a series of steps for conducting business could not be patented. A leading treatise, for example, listed “‘systems’ of business” as an “unpatentable subjec[t].” 1 A. Deller, Walker on Patents §18, p. 62 (1937) [and citing other sources].

#### *Modern American Patent Law*

[I]n 1952, when Congress updated the patent laws as part of its ongoing project to revise the United States Code, it changed the operative language in §101, replacing the term “art” with “process” and adding a definition of “process” as a “process, art or method,” §100(b).

That change was made for clarity and did not alter the scope of a patentable “process.” See *Diehr*, 450 U.S., at 184. The new terminology was added only in recognition of the fact that courts had been interpreting the category “art” by using the terms “process or method”; Congress thus wanted to avoid “the necessity of explanation that the word ‘art’ as used in this place means ‘process or method.’” S. Rep. No.1979, 82d Cong., 2d Sess., 5 (1952) (hereinafter S. Rep. 1979); accord, H.R. Rep. No.1923, 82d Cong., 2d Sess., 6 (1952) (hereinafter H.R. Rep. 1923).

It appears that when Congress changed the language in §101 to incorporate the prevailing judicial terminology, it merely codified the prevailing judicial interpretation of that category of subject matter. Indeed, one of the main drafters of the Act explained that the definition of the term “process” in §100(b) reflects “how the courts have construed the term ‘art.’” Tr. of address by Judge Giles S. Rich to the New York Patent Law Association 7-8 (Nov. 6, 1952).

#### *“Anything Under the Sun”*

Despite strong evidence that Congress has consistently authorized patents for a limited class of subject matter and that the 1952 Act did not alter the nature of the then-existing limits, petitioners and their *amici* emphasize a single phrase in the Act’s legislative history, which suggests that the statutory subject matter “‘include[s] anything under the sun that is made by man.” Brief for Petitioners 19 (quoting *Chakrabarty*, 447 U.S., at 309, in turn quoting S. Rep.1979, at 5). Similarly, the Court relies on language from our opinion in *Chakrabarty* that was based in part on this piece of legislative history. See *ante*, at \_\_\_, \_\_\_.

This reliance is misplaced. We have never understood that piece of legislative history to mean that any series of steps is a patentable process. Indeed, if that were so, then our many opinions analyzing what is a patentable process were simply wastes of pages in the U.S. Reports. And to accept that errant piece of legislative history as widening the scope of the patent law would contradict other evidence in the congressional record, as well as our presumption that the 1952 Act merely codified the meaning of “process” and did not expand it, see *Diehr*, 450 U.S., at 184.

Taken in context, it is apparent that the quoted language has a far less expansive meaning. The full sentence in the Committee Reports reads: “A person may have ‘invented’ a machine or a manufacture, which may include anything under

### 3. Patent Law

the sun that is made by man, but it is not necessarily patentable under section 101 unless the conditions of [this] title are fulfilled.” S.Rep.1979, at 5; H.R. Rep.1923, at 6. Viewed as a whole, it seems clear that this language does not purport to explain that “anything under the sun” is patentable. Indeed, the language may be understood to state the exact opposite: that “[a] person may have ‘invented’ . . . anything under the sun,” but that thing “is not necessarily patentable under section 101.” Thus, even in the *Chakrabarty* opinion, which relied on this quote, we cautioned that the 1952 Reports did not “suggest that §101 has no limits or that it embraces every discovery.” 447 U.S., at 309.

Moreover, even if the language in the Committee Reports was meant to flesh out the meaning of any portion of §101, it did not purport to define the term “process.” The language refers only to “manufacture[s]” and “machine[s],” tangible objects “made by man.” It does not reference the “process” category of subject matter (nor could a process be comfortably described as something “*made* by man”). The language may also be understood merely as defining the term “invents” in §101.

The 1952 Act, in short, cannot be understood as expanding the scope of patentable subject matter by suggesting that any series of steps may be patented as a “process” under §101. If anything, the Act appears to have codified the conclusion that subject matter which was understood not to be patentable in 1952 was to remain unpatentable.

\* \* \*

Since at least the days of Assyrian merchants, people have devised better and better ways to conduct business. Yet it appears that neither the Patent Clause, nor early patent law, nor the current §101 contemplated or was publicly understood to mean that such innovations are patentable. Although it may be difficult to define with precision what is a patentable “process” under §101, the historical clues converge on one conclusion: A business method is not a “process.” And to the extent that there is ambiguity, we should be mindful of our judicial role. “[W]e must proceed cautiously when we are asked to extend patent rights” into an area that the Patent Act likely was not “enacted to protect,” *Flook*, 437 U.S., at 596, 593, lest we create a legal regime that Congress never would have endorsed, and that can be repaired only by disturbing settled property rights.

## V.

Despite the strong historical evidence that a method of doing business does not constitute a “process” under §101, petitioners nonetheless argue—and the Court suggests in dicta, *ante*, at \_\_\_ \_\_\_ that a subsequent law, the First Inventor Defense Act of 1999, “must be read together” with §101 to make business methods patentable. Brief for Petitioners 29. This argument utilizes a flawed method of statutory interpretation and ignores the motivation for the 1999 Act.



### 3. Patent Law

In 1999, following a Federal Circuit decision that intimated business methods could be patented, see *State Street*, 149 F.3d 1368, Congress moved quickly to limit the potential fallout. Congress passed the 1999 Act, codified at 35 U.S.C. §273, which provides a limited defense to claims of patent infringement, see §273(b), regarding certain “method[s] of doing or conducting business,” §273(a)(3).

It is apparent, both from the content and history of the Act, that Congress did not in any way ratify *State Street* (or, as petitioners contend, the broadest possible reading of *State Street*). The Act merely limited one potential effect of that decision: that businesses might suddenly find themselves liable for innocently using methods they assumed could not be patented. The Act did not purport to amend the limitations in §101 on eligible subject matter. Indeed, Congress placed the statute in Part III of Title 35, which addresses “Patents and Protection of Patent Rights,” rather than in Part II, which contains §101 and addresses “Patentability of Inventions and Grant of Patents.” Particularly because petitioners’ reading of the 1999 Act would expand §101 to cover a category of processes that have not “historically been eligible” for patents, *Diehr*, 450 U.S., at 184, 101 S. Ct. 1048, we should be loathe to conclude that Congress effectively amended §101 without saying so clearly. We generally presume that Congress “does not, one might say, hide elephants in mouseholes.” *Whitman v. American Trucking Assns., Inc.*, 531 U.S. 457, 468 (2001).

The Act therefore is, at best, merely evidence of 1999 legislative views on the meaning of the earlier, 1952 Act. “[T]he views of a subsequent Congress,” however, “form a hazardous basis for inferring the intent of an earlier one.” *United States v. Price*, 361 U.S. 304, 313 (1960). When a later statute is offered as “an expression of how the . . . Congress interpreted a statute passed by another Congress . . . a half century before,” “such interpretation has very little, if any, significance.” *Rainwater v. United States*, 356 U.S. 590, 593 (1958).

Furthermore, even assuming that Congress’ views at the turn of the 21st century could potentially serve as a valid basis for interpreting a statute passed in the mid-20th century, the First Inventor Defense Act does not aid petitioners because it does not show that the later Congress itself understood §101 to cover business methods. If anything, it shows that a few judges on the Federal Circuit understood §101 in that manner and that Congress understood what those judges had done. The Act appears to reflect surprise and perhaps even dismay that business methods might be patented. Thus, in the months following *State Street*, congressional authorities lamented that “business methods and processes . . . until recently were thought not to be patentable,” H.R. Rep. No. 106-464, p. 121 (1999); accord, H.R. Rep. No. 106-287, pt. 1, p. 31 (1999). The fact that Congress decided it was appropriate to create a new *defense* to claims that business method patents were being infringed merely demonstrates recognition that such claims could create a significant new problem for the business community.

The Court nonetheless states that the 1999 Act “acknowledges that there may be business method patents,” thereby “clarify[ing]” its “understanding” of §101. *Ante*, at \_\_\_\_\_. More specifically, the Court worries that if we were to interpret the 1952 Act to exclude business methods, our interpretation “would render §273 meaningless.” *Ibid*. I agree that “[a] statute should be construed so that effect is

### 3. Patent Law

given to all its provisions.” *Corley v. United States*, 556 U.S. \_\_\_, \_\_\_, 129 S. Ct. 1558, 1566 (2009) (internal quotation marks omitted). But it is a different matter altogether when the Court construes one statute, the 1952 Act, to give effect to a different statute, the 1999 Act.

Put another way, we ordinarily assume, quite sensibly, that Congress would not in one statute include two provisions that are at odds with each other. But as this case shows, that sensible reasoning can break down when applied to different statutes. The 1999 Act was passed to limit the impact of the Federal Circuit’s then-recent statements on the 1952 Act. Although repudiating that judicial dictum (as we should) might effectively render the 1999 Act a nullity going forward, such a holding would not mean that it was a nullity when Congress enacted it. Section 273 may have been a technically unnecessary response to confusion about patentable subject matter, but it appeared necessary in 1999 in light of what was being discussed in legal circles at the time.

In light of its history and purpose, I think it obvious that the 1999 Congress would never have enacted §273 if it had foreseen that this Court would rely on the provision as a basis for concluding that business methods are patentable. Section 273 is a red herring; we should be focusing our attention on §101 itself.

## VI.

The constitutionally mandated purpose and function of the patent laws bolster the conclusion that methods of doing business are not “processes” under §101.

The Constitution allows Congress to issue patents “[t]o promote the Progress of . . . useful Arts,” Art. I, §8, cl. 8. This clause “is both a grant of power and a limitation.” *Graham*, 383 U.S., at 5. It “reflects a balance between the need to encourage innovation and the avoidance of monopolies which stifle competition without any concomitant advance in the ‘Progress of Science and useful Arts.’” *Bonito Boats*, 489 U.S., at 146. Thus, although it is for Congress to “implement the stated purpose of the Framers by selecting the policy which in its judgment best effectuates the constitutional aim,” *Graham*, 383 U.S., at 6, we interpret ambiguous patent laws as a set of rules that “wee[d] out those inventions which would not be disclosed or devised but for the inducement of a patent,” *id.*, at 11, and that “embod[y]” the “careful balance between the need to promote innovation and the recognition that imitation and refinement through imitation are both necessary to invention itself and the very lifeblood of a competitive economy,” *Bonito Boats*, 489 U.S., at 146.

Although there is certainly disagreement about the need for patents, scholars generally agree that when innovation is expensive, risky, and easily copied, inventors are less likely to undertake the guaranteed costs of innovation in order to obtain the mere possibility of an invention that others can copy. Both common sense and recent economic scholarship suggest that these dynamics of cost, risk, and reward vary by the type of thing being patented. [See, e.g., Burk & Lemley,



### 3. Patent Law

Policy Levers in Patent Law, 89 Va. L.Rev. 1575, 1577-1589 (2003) (hereinafter Burk & Lemley).]

Many have expressed serious doubts about whether patents are necessary to encourage business innovation. [See, e.g., Burk & Lemley 1618; Dreyfuss, Are Business Methods Patents Bad for Business? 16 Santa Clara Computer & High Tech. L.J. 263, 274-277 (2000); Posner, The Law and Economics of Intellectual Property, 131 Daedalus 5 (Spring 2002).]. Although counterfactuals are a dubious form of analysis, I find it hard to believe that many of our entrepreneurs forwent business innovation because they could not claim a patent on their new methods.

“[C]ompanies have ample incentives to develop business methods even without patent protection, because the competitive marketplace rewards companies that use more efficient business methods.” Burk & Lemley 1618. Innovators often capture advantages from new business methods notwithstanding the risk of others copying their innovation. Some business methods occur in secret and therefore can be protected with trade secrecy. And for those methods that occur in public, firms that innovate often capture long-term benefits from doing so, thanks to various first mover advantages, including lockins, branding, and networking effects. [See Burk & Lemley 1618; Dreyfuss 275]. Concededly, there may some methods of doing business that do not confer sufficient first-mover advantages. [See Abramowicz & Duffy, Intellectual Property for Market Experimentation, 83 N.Y.U. & enspace;L.Rev. 337, 340-342 (2008).]

The primary concern is that patents on business methods may prohibit a wide swath of legitimate competition and innovation. As one scholar explains, “it is useful to conceptualize knowledge as a pyramid: the big ideas are on top; specific applications are at the bottom.” Dreyfuss 275. The higher up a patent is on the pyramid, the greater the social cost and the greater the hindrance to further innovation. [See Merges & Nelson, On the Complex Economics of Patent Scope, 90 Colum. L. Rev. 839, 873-878 (1990).]

If business methods could be patented, then many business decisions, no matter how small, could be *potential* patent violations. Businesses would either live in constant fear of litigation or would need to undertake the costs of searching through patents that describe methods of doing business, attempting to decide whether their innovation is one that remains in the public domain. See Long, Information Costs in Patent and Copyright, 90 Va. L. Rev. 465, 487-488 (2004) [See also P. Menell & S. Scotchmer, Intellectual Property Law, in 2 Handbook of Law and Economics 1500-1501, 1506 (M. Polinsky & S. Shavell eds. 2007).]

\* \* \*

The constitutional standard for patentability is difficult to apply with any precision, and Congress has significant discretion to “implement the stated purpose of the Framers by selecting the policy which in its judgment best effectuates the constitutional aim,” *Graham*, 383 U.S., at 6, 86 S.Ct. 684. But Congress has not, either explicitly or implicitly, determined that patents on methods of doing business would effectuate this aim. And as I understand their practical consequences, it is hard to see how they would.

## VII.

The Constitution grants to Congress an important power to promote innovation. In its exercise of that power, Congress has established an intricate system of intellectual property. The scope of patentable subject matter under that system is broad. But it is not endless. In the absence of any clear guidance from Congress, we have only limited textual, historical, and functional clues on which to rely. Those clues all point toward the same conclusion: that petitioners' claim is not a "process" within the meaning of §101 because methods of doing business are not, in themselves, covered by the statute. In my view, acknowledging as much would be a far more sensible and restrained way to resolve this case. Accordingly, while I concur in the judgment, I strongly disagree with the Court's disposition of this case.

Justice BREYER, with whom Justice SCALIA joins as to Part II, concurring in the judgment.

## I.

I agree with Justice STEVENS that a "general method of engaging in business transactions" is not a patentable "process" within the meaning of 35 U.S.C. §101. *Ante*, at \_\_\_ (STEVENS, J., concurring in judgment). This Court has never before held that so-called "business methods" are patentable, and, in my view, the text, history, and purposes of the Patent Act make clear that they are not. *Ante*, at \_\_\_ \_\_\_. I would therefore decide this case on that ground, and I join Justice STEVENS' opinion in full.

I write separately, however, in order to highlight the substantial *agreement* among many Members of the Court on many of the fundamental issues of patent law raised by this case. In light of the need for clarity and settled law in this highly technical area, I think it appropriate to do so.

## II.

In addition to the Court's unanimous agreement that the claims at issue here are unpatentable abstract ideas, it is my view that the following four points are consistent with both the opinion of the Court and Justice STEVENS' opinion concurring in the judgment:

*First*, although the text of §101 is broad, it is not without limit. See *ante*, at \_\_\_ - \_\_\_ (opinion of the Court); *ante*, at \_\_\_ (STEVENS, J., concurring in judgment). "[T]he underlying policy of the patent system [is] that 'the things which are worth to the public the embarrassment of an exclusive patent,' . . . must outweigh the restrictive effect of the limited patent monopoly." *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1, 10-11 (1966) (quoting Letter from Thomas Jefferson to Isaac McPherson (Aug. 13, 1813), in 6 Writings of Thomas Jefferson 181 (H. Washington ed.)). The Court has thus been careful in interpreting the Patent Act to "determine not only what is protected, but also what is free for all to use." *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151. In particular, the

### 3. Patent Law

Court has long held that “[p]henomena of nature, though just discovered, mental processes, and abstract intellectual concepts are not patentable” under §101, since allowing individuals to patent these fundamental principles would “wholly preempt” the public’s access to the “basic tools of scientific and technological work.” *Gottschalk v. Benson*, 409 U.S. 63, 67, 72.

*Second*, in a series of cases that extend back over a century, the Court has 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.” *Diehr*, *supra*, at 184 (emphasis added; internal quotation marks omitted). Application of this test, the so-called “machine-or-transformation test,” has thus repeatedly helped the Court to determine what is “a patentable ‘process.’” *Flook*, *supra*, at 589.

*Third*, while the machine-or-transformation test has always been a “useful and important clue,” it has never been the “sole test” for determining patentability. *Ante*, at \_\_\_; see also *ante*, at \_\_\_ (STEVENS, J., concurring in judgment); *Benson*, *supra*, at 71 (rejecting the argument that “no process patent could ever qualify” for protection under §101 “if it did not meet the [machine-or-transformation] requirements”). Rather, the Court has emphasized that a process claim meets the requirements of §101 when, “considered as a whole,” it “is performing a function which the patent laws were designed to protect (*e.g.*, transforming or reducing an article to a different state or thing).” *Diehr*, *supra*, at 192. The machine-or-transformation test is thus an *important example* of how a court can determine patentability under §101, but the Federal Circuit erred in this case by treating it as the *exclusive test*.

*Fourth*, although the machine-or-transformation test is not the only test for patentability, this by no means indicates that anything which produces a “‘useful, concrete, and tangible result,’” *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373 (C.A. Fed. 1998), is patentable. “[T]his Court has never made such a statement and, if taken literally, the statement would cover instances where this Court has held the contrary.” *Laboratory Corp. of America Holdings v. Metabolite Laboratories, Inc.*, 548 U.S. 124, 136 (2006) (BREYER, J., dissenting from dismissal of certiorari as improvidently granted). Indeed, the introduction of the “useful, concrete, and tangible result” approach to patentability, associated with the Federal Circuit’s *State Street* decision, preceded the granting of patents that “ranged from the somewhat ridiculous to the truly absurd.” *In re Bilski*, 545 F.3d 943, 1004 (C.A. Fed. 2008) (Mayer, J., dissenting) (citing patents on, *inter alia*, a “method of training janitors to dust and vacuum using video displays,” a “system for toilet reservations,” and a “method of using color-coded bracelets to designate dating status in order to limit ‘the embarrassment of rejection’”).

In sum, it is my view that, in reemphasizing that the “machine-or-transformation” test is not necessarily the *sole* test of patentability, the Court intends neither to de-emphasize the test’s usefulness nor to suggest that many patentable processes lie beyond its reach.

### III.

With these observations, I concur in the Court’s judgment.

*Insert on page 201, replacing the Note on “Written Description” and Biotechnology:*

==== ***Ariad Pharmaceuticals, Inc. v. Eli Lilly & Co.***  
 =====  
 ===== ***598 F.3d 1336 (Fed. Cir. 2010) (en banc)***

Before MICHEL, Chief Judge, NEWMAN, MAYER, LOURIE, RADER, BRYSON, GAJARSA, LINN, DYK, PROST, and MOORE, Circuit Judges.

Opinion for the court filed by Circuit Judge Lourie, in which Chief Judge Michel and Circuit Judges Newman, Mayer, Bryson, Gajarsa, Dyk, Prost, and Moore join. Additional views filed by Circuit Judge NEWMAN. Concurring opinion filed by Circuit Judge Gajarsa. Dissenting-in-part, concurring-in-part opinion filed by Circuit Judge RADER, in which Circuit Judge Linn joins. Dissenting-in-part, concurring-in-part opinion filed by Circuit Judge Linn, in which Circuit Judge Rader joins.

LOURIE, Circuit Judge.

Ariad Pharmaceuticals, Inc., Massachusetts Institute of Technology, the Whitehead Institute for Biomedical Research, and the President and Fellows of Harvard College (collectively, “Ariad”) brought suit against Eli Lilly & Company (“Lilly”) in the United States District Court for the District of Massachusetts, alleging infringement of U.S. Patent 6,410,516 (“the ’516 patent”). After trial, at which a jury found infringement, but found none of the asserted claims invalid, a panel of this court reversed the district court’s denial of Lilly’s motion for judgment as a matter of law (“JMOL”) and held the asserted claims invalid for lack of written description. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 560 F.3d 1366 (Fed. Cir. 2009).

Ariad petitioned for rehearing *en banc*, challenging this court’s interpretation of 35 U.S.C. §112, first paragraph, as containing a separate written description requirement. Because of the importance of the issue, we granted Ariad’s petition and directed the parties to address whether §112, first paragraph, contains a written description requirement separate from the enablement requirement and, if so, the scope and purpose of that requirement. We now reaffirm that §112, first paragraph, contains a written description requirement separate from enablement, and we again reverse the district court’s denial of JMOL and hold the asserted claims of the ’516 patent invalid for failure to meet the statutory written description requirement.

## Background

The ’516 patent relates to the regulation of gene expression by the transcription factor NF-κB. The inventors of the ’516 patent were the first to identify NF-κB and to uncover the mechanism by which NF-κB activates gene expression underlying the body’s immune responses to infection. The inventors discovered that NF-κB normally exists in cells as an inactive complex with a protein inhibitor, named “IκB” (“Inhibitor of kappa B”), and is activated by extracellular stimuli,

### 3. Patent Law

such as bacterial-produced lipopolysaccharides, through a series of biochemical reactions that release it from I $\kappa$ B. Once free of its inhibitor, NF- $\kappa$ B travels into the cell nucleus where it binds to and activates the transcription of genes containing a NF- $\kappa$ B recognition site. The activated genes (*e.g.*, certain cytokines), in turn help the body to counteract the extracellular assault. The production of cytokines can, however, be harmful in excess. Thus the inventors recognized that artificially interfering with NF- $\kappa$ B activity could reduce the harmful symptoms of certain diseases, and they filed a patent application on April 21, 1989, disclosing their discoveries and claiming methods for regulating cellular responses to external stimuli by reducing NF- $\kappa$ B activity in a cell.

Ariad brought suit against Lilly on June 25, 2002, the day the '516 patent issued. Ariad alleged infringement of claims 80, 95, 144, and 145 by Lilly's Evista® and Xigris® pharmaceutical products. The asserted claims, rewritten to include the claims from which they depend, are as follows:

80. [A method for modifying effects of external influences on a eukaryotic cell, which external influences induce NF- $\kappa$ B-mediated intracellular signaling, the method comprising altering NF- $\kappa$ B activity in the cells such that NF- $\kappa$ B-mediated effects of external influences are modified, wherein NF- $\kappa$ B activity in the cell is reduced] wherein reducing NF- $\kappa$ B activity comprises reducing binding of NF- $\kappa$ B to NF- $\kappa$ B recognition sites on genes which are transcriptionally regulated by NF- $\kappa$ B.

95. [A method for reducing, in eukaryotic cells, the level of expression of genes which are activated by extracellular influences which induce NF- $\kappa$ B mediated intracellular signaling, the method comprising reducing NF- $\kappa$ B activity in the cells such that expression of said genes is reduced], carried out on human cells.

144. [A method for reducing bacterial lipopolysaccharide-induced expression of cytokines in mammalian cells, which method comprises reducing NF- $\kappa$ B activity in the cells so as to reduce bacterial lipopolysaccharide-induced expression of said cytokines in the cells] wherein reducing NF- $\kappa$ B activity comprises reducing binding of NF- $\kappa$ B to NF- $\kappa$ B recognition sites on genes which are transcriptionally regulated by NF- $\kappa$ B.

145. [A method for reducing bacterial lipopolysaccharide-induced expression of cytokines in mammalian cells, which method comprises reducing NF- $\kappa$ B activity in the cells so as to reduce bacterial lipopolysaccharide-induced expression of said cytokines in the cells], carried out on human cells.

The claims are thus genus claims, encompassing the use of all substances that achieve the desired result of reducing the binding of NF- $\kappa$ B to NF- $\kappa$ B recognition sites. Furthermore, the claims, although amended during prosecution, use language that corresponds to language present in the priority application. . . . The specification also hypothesizes three types of molecules with the potential to reduce NF- $\kappa$ B activity in cells: decoy, dominantly interfering, and specific inhibitor molecules.

In April 2006, the district court held a fourteen-day jury trial on the issues of infringement and validity. The jury rendered a special verdict finding infringement of claims 80 and 95 with respect to Evista® and claims 144 and 145 with respect to Xigris®. The jury also found that the asserted claims were not invalid for anticipation, lack of enablement, or lack of written description. The court denied

without opinion Lilly's motions for JMOL and, in the alternative, a new trial. In August 2006, the court conducted a four-day bench trial on Lilly's additional defenses of unpatentable subject matter, inequitable conduct, and prosecution laches, ruling in favor of Ariad on all three issues. *Ariad Pharms., Inc. v. Eli Lilly & Co.*, 529 F.Supp.2d 106 (D.Mass. 2007).

Lilly timely appealed to this court, and on April 3, 2009, a panel affirmed in part and reversed in part. *Ariad*, 560 F.3d at 1369. The panel upheld the district court's finding of no inequitable conduct, *id.* at 1380, but reversed the jury's verdict on written description, holding the asserted claims invalid for lack of an adequate written description as required by 35 U.S.C. §112, first paragraph, *id.* at 1376. Ariad petitioned for rehearing *en banc*, challenging the existence of a written description requirement in §112, first paragraph, separate from the enablement requirement. Although not a new question, *see In re Barker*, 559 F.2d 588, 591-93 (CCPA 1977), its prominence has increased in recent years . . . . In light of the controversy concerning the distinctness and proper role of the written description requirement, we granted Ariad's petition, vacating the prior panel opinion and directing the parties to brief two questions:

- (1) Whether 35 U.S.C. §112, paragraph 1, contains a written description requirement separate from an enablement requirement?
- (2) If a separate written description requirement is set forth in the statute, what is the scope and purpose of that requirement?

## Discussion

### I.

Although the parties differ in their answers to the court's questions, their positions converge more than they first appear. Ariad, in answering the court's first question, argues that §112, first paragraph, does *not* contain a written description requirement separate from enablement. Yet, in response to this court's second question on the scope and purpose of a written description requirement, Ariad argues that the statute contains two description requirements: "Properly interpreted, the statute requires the specification to describe (i) what the invention is, and (ii) how to make and use it. . . . Ariad reconciles this apparent contradiction by arguing that the legal sufficiency of its two-prong description requirement is judged by whether it enables one of skill in the art to make and use the claimed invention. Thus, according to Ariad, in order to enable the invention, the specification must first identify "what the invention is, for otherwise it fails to inform a person of skill in the art what to make and use. Yet Ariad argues that this first step of "identifying" the invention applies only in the context of priority (*i.e.*, claims amended during prosecution; priority under 35 U.S.C. §§119, 120; and interferences) because original claims "constitute their own description."

### 3. Patent Law

Lilly, in contrast, answers the court's first question in the affirmative, arguing that two hundred years of precedent support the existence of a statutory written description requirement separate from enablement. Thus, Lilly argues that the statute requires, first, a written description of the invention and, second, a written description of how to make and use the invention so as to enable one of skill in the art to make and use it. Finally, Lilly asserts that this separate written description requirement applies to all claims—both original and amended—to ensure that inventors have actually invented the subject matter claimed.

Thus, although the parties take diametrically opposed positions on the existence of a written description requirement separate from enablement, both agree that the specification must contain a written description of the invention to establish what the invention is. The dispute, therefore, centers on the standard to be applied and whether it applies to original claim language.

#### A.

As in any case involving statutory interpretation, we begin with the language of the statute itself. Section 112, first paragraph, reads as follows:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

According to Ariad, a plain reading of the statute reveals two components: a written description (i) of the invention, and (ii) of the manner and process of making and using it. Yet those two components, goes Ariad's argument, must be judged by the final prepositional phrase; both written descriptions must be "in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same." Specifically, Ariad parses the statute as follows:

The specification shall contain

[A] a written description

[i] of the invention, and

[ii] of the manner and process of making and using it,

[B] in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same . . .

Ariad argues that its interpretation best follows the rule of English grammar that prepositional phrases (here, "of the invention," "of the manner and process of making and using it," and "in such full, clear, concise, and exact terms") modify another word in the sentence (here, "written description"), and that it does not



inexplicably ignore the comma after “making and using it” or sever the “description of the invention” from the requirement that it be in “full, clear, concise, and exact terms,” leaving the description without a legal standard.

Ariad also argues that earlier versions of the Patent Act support its interpretation. Specifically, Ariad contends that the first Patent Act, adopted in 1790, and its immediate successor, adopted in 1793, required a written description of the invention that accomplished two purposes: (i) to distinguish the invention from the prior art, and (ii) to enable a person skilled in the art to make and use the invention. Ariad then asserts that when Congress assigned the function of defining the invention to the claims in 1836, Congress amended the written description requirement so that it served a single purpose: enablement.

Lilly disagrees, arguing that §112, first paragraph, contains three separate requirements. Specifically, Lilly parses the statute as follows:

- (1) “The specification shall contain a written description of the invention, *and*”
- (2) “The specification shall contain a written description . . . of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, *and*”
- (3) “The specification . . . shall set forth the best mode contemplated by the inventor of carrying out the invention.”

Lilly argues that Ariad’s construction ignores a long line of judicial precedent interpreting the statute’s predecessors to contain a separate written description requirement, an interpretation Congress adopted by reenacting the current language of §112, first paragraph, without significant amendment.

We agree with Lilly and read the statute to give effect to its language that the specification “shall contain a written description of the invention” and hold that §112, first paragraph, contains two separate description requirements: a “written description [i] of the invention, *and* [ii] of the manner and process of making and using [the invention]”. 35 U.S.C. §112, ¶1 (emphasis added). On this point, we do not read Ariad’s position to be in disagreement as Ariad concedes the existence of a written description requirement. . . . Instead Ariad contends that the written description requirement exists, not for its own sake as an independent statutory requirement, but only to identify the invention that must comply with the enablement requirement.

But, unlike Ariad, we see nothing in the statute’s language or grammar that unambiguously dictates that the adequacy of the “written description of the invention” must be determined solely by whether that description identifies the invention so as to enable one of skill in the art to make and use it. The prepositional phrase “in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same” modifies only “the written description . . . of the manner and process of making and using [the invention],” as Lilly argues, without violating the rules of grammar. That the adequacy of the description of the manner and process of *making* and *using* the invention is judged



### 3. Patent Law

by whether that description enables one skilled in the art to *make* and *use* the same follows from the parallelism of the language.

While *Ariad* agrees there is a requirement to describe the invention, a few amici appear to suggest that the only description requirement is a requirement to describe enablement. If Congress had intended enablement to be the sole description requirement of §112, first paragraph, the statute would have been written differently. Specifically, Congress could have written the statute to read, “The specification shall contain a written description of the invention, in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same,” or “The specification shall contain a written description of the manner and process of making and using the invention, in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same.” Under the amici’s construction a portion of the statute—either “and of the manner and process of making and using it” or “[a written description] of the invention”—becomes surplusage, violating the rule of statutory construction that Congress does not use unnecessary words.

Furthermore, since 1793, the Patent Act has expressly stated that an applicant must provide a written description of the invention, and after the 1836 Act added the requirement for claims, the Supreme Court applied this description requirement separate from enablement. *See infra* Section I.B. Congress recodified this language in the 1952 Act, and nothing in the legislative history indicates that Congress intended to rid the Act of this requirement.

Finally, a separate requirement to describe one’s invention is basic to patent law. Every patent must describe an invention. It is part of the *quid pro quo* of a patent; one describes an invention, and, if the law’s other requirements are met, one obtains a patent. The specification must then, of course, describe how to make and use the invention (*i.e.*, enable it), but that is a different task. A description of the claimed invention allows the United States Patent and Trademark Office (“PTO”) to examine applications effectively; courts to understand the invention, determine compliance with the statute, and to construe the claims; and the public to understand and improve upon the invention and to avoid the claimed boundaries of the patentee’s exclusive rights.

## B.

*Ariad* argues that Supreme Court precedent comports with its reading of the statute and provides no support for a written description requirement separate from enablement. Specifically, *Ariad* asserts that in *Evans v. Eaton*, 20 U.S. (7 Wheat.) 356, 433-34, 5 L.Ed. 472 (1822), the Supreme Court recognized just two requirements under §3 of the 1793 Act, the requirements “to enable” the invention and “to distinguish” it from all things previously known. And, goes *Ariad*’s argument, since the 1836 Act, which removed the latter language and added the requirement for claims, the Court has consistently held that a patent applicant need fulfill but a single “written description” requirement, the measure of which is enablement.

### 3. Patent Law

Lilly disagrees and reads Evans as acknowledging a written description requirement separate from enablement. Lilly further contends that the Court has continually confirmed the existence of a separate written description requirement, including in *O'Reilly v. Morse*, 56 U.S. (15 How.) 62 (1853) under the 1836 Act; *Schriber-Schroth Co. v. Cleveland Trust Co.*, 305 U.S. 47 (1938), under the 1870 Act; and more recently in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722, 736 (2002).

Like Lilly, we also read Supreme Court precedent as recognizing a written description requirement separate from an enablement requirement even after the introduction of claims. Specifically, in *Schriber-Schroth*, the Court held that a patent directed to pistons for a gas engine with “extremely rigid” webs did not adequately describe amended claims that recited flexible webs under the then-in-force version of §112, first paragraph. 305 U.S. at 56-57, 59. The Court ascribed two purposes to this portion of the statute, only the first of which involved enablement:

[1] to require the patentee to describe his invention so that others may construct and use it after the expiration of the patent and [2] to inform the public during the life of the patent of the limits of the monopoly asserted, so that it may be known which features may be safely used or manufactured without a license and which may not.

*Id.* at 57. The Court then concluded that even if the original specification enabled the use of a flexible web, the claim could derive no benefit from it because “that was not the invention which [the patentee] described by his references to an extremely rigid web.” *Id.* at 58-59 (emphasis added); see also *MacKay Radio & Tel. Co. v. Radio Corp. of Am.*, 306 U.S. 86, 98-102 (1939) (holding invalid claims amended to include structures “not within the invention described in the application” even though the variations were small). Although the Court did not expressly state that it was applying a description of the invention requirement separate from enablement, that is exactly what the Court did.

Further, both before and after *Schriber-Schroth*, the Court has stated that the statute serves a purpose other than enablement. In *Gill v. Wells*, 89 U.S. (22 Wall.) 1 (1874), the Court held invalid a reissue patent for claiming a combination not described in the original application, but the Court also emphasized the need for all patents to meet the “three great ends” of §26, only one of which was enablement. Specifically, the Court stated:

(1) That the government may know what they have granted and what will become public property when the term of the monopoly expires. (2.) That licensed persons desiring to practice the invention may know, during the term, how to make, construct, and use the invention. (3.) That other inventors may know what part of the field of invention is unoccupied.

*Id.* at 25-26. Finally, most recently in *Festo*, the Court recited three requirements for §112, first paragraph, and noted a written description requirement separate from the others:

### 3. Patent Law

[T]he patent application must *describe, enable, and set forth the best mode* of carrying out the invention. These latter requirements must be satisfied before issuance of the patent, for exclusive patent rights are given in exchange for disclosing the invention to the public. What is claimed by the patent application must be the same as what is disclosed in the specification; otherwise the patent should not issue. The patent also should not issue if the other requirements of §112 are not satisfied. . . .

535 U.S. at 736 (emphasis added) (internal citations omitted). As a subordinate federal court, we may not so easily dismiss such statements as dicta but are bound to follow them.

A separate written description requirement also does not conflict with the function of the claims. 35 U.S.C. §112, ¶2. Claims define the subject matter that, after examination, has been found to meet the statutory requirements for a patent. Their principal function, therefore, is to provide notice of the boundaries of the right to exclude and to define limits; it is not to describe the invention, although their original language contributes to the description and in certain cases satisfies it. Claims define and circumscribe, the written description discloses and teaches.

#### C.

In addition to the statutory language and Supreme Court precedent supporting the existence of a written description requirement separate from enablement, *stare decisis* impels us to uphold it now. Ariad acknowledges that this has been the law for over forty years, and to change course now would disrupt the settled expectations of the inventing community, which has relied on it in drafting and prosecuting patents, concluding licensing agreements, and rendering validity and infringement opinions. . . . If the law of written description is to be changed, contrary to sound policy and the uniform holdings of this court, the settled expectations of the inventing and investing communities, and PTO practice, such a decision would require good reason and would rest with Congress.

#### D.

Ariad next argues that an incorrect reading of *In re Ruschig*, 54 C.C.P.A. 1551, 379 F.2d 990 (1967), by our predecessor court, the Court of Customs and Patent Appeals (“CCPA”), and then by this court, created the first written description requirement separate from enablement. Yet Ariad also asserts, in response to Lilly’s argument that *In re Moore*, 33 C.C.P.A. 1083, 155 F.2d 379 (1946); *In re Sus*, 49 C.C.P.A. 1301, 306 F.2d 494 (1962); and *Jepson v. Coleman*, 50 C.C.P.A. 1051, 314 F.2d 533 (1963), applied a separate written description requirement pre-*Ruschig*, that those cases “merely tested whether the specification *identified* the same invention that was defined by later-added or amended claims—which is an aspect of enablement—and did not interpret §112, ¶1 as containing an

independent description-possession requirement.” Appellee Br. 22-23. Thus, according to Ariad, a written description of the invention is required but is not separate from enablement because it identifies the invention that must be enabled, and this, in Ariad’s view, differs from first requiring the invention to be described and then separately requiring it to be enabled.

We view this argument as a distinction without a practical difference insofar as both approaches require a written description of the invention in the specification. In either case the analysis compares the claims with the invention disclosed in the specification, and if the claimed invention does not appear in the specification, both Ariad and Lilly agree that the claim — whether in *Schriber-Schroth* or *Ruschig* — fails regardless whether one of skill in the art could make or use the claimed invention. *Ruschig* involved a claim amended during prosecution to recite a specific chemical compound, chlorpropamide. 379 F.2d at 991. The specification as filed disclosed a genus encompassing about “half a million possible compounds,” but it did not disclose chlorpropamide specifically. *Id.* at 993. The CCPA affirmed the PTO’s rejection of the compound claim because the specification provided no guides or “blaze marks” to single out chlorpropamide from all the other compounds, and thus did not support the later-added claim. *Id.* at 994-95. The court also rejected the argument that one of skill in the art would be enabled to make chlorpropamide as “beside the point for the question is not whether he would be so enabled but whether the specification discloses the compound to him, specifically, as something appellants actually invented,” which, the court held, it did not. *Id.* at 995-96.

According to Ariad, the court properly rejected *Ruschig*’s claim based on enablement because the specification did not identify the later-claimed compound, leaving the skilled artisan with no guide to select that compound from the myriad of other compounds encompassed by the broad disclosure. According to Lilly, the court properly rejected the claim under a written description requirement separate from enablement because the specification did not disclose the later-claimed compound to one of skill in the art as something the inventors actually invented out of the myriad of other compounds encompassed by the broad disclosure. Again, this difference amounts to little more than semantics as the parties agree that the court properly affirmed the rejection because the original application did not disclose the specific claimed invention, chlorpropamide, even if one of skill in the art could, based on the disclosure with respect to related compounds, make and use it.

Ariad also argues that the court properly rejected *Ruschig*’s claim as violating 35 U.S.C. §132’s prohibition on “new matter.” But §132 is an examiner’s instruction, and unlike §282 of the Patent Act, which makes the failure to comply with §112 a defense to infringement, §132 provides no statutory penalty for a breach. Express statutory invalidity defenses carry more weight than examiner’s instructions, and prohibiting adding new matter to the claims has properly been held enforceable under §112, first paragraph. See *In re Rasmussen*, 650 F.2d 1212, 1214-15 (CCPA 1981). Regardless, one can fail to meet the requirements of the statute in more than one manner, and the prohibition on new matter does not negate the need to provide a written description of one’s invention.

### 3. Patent Law

#### E.

In contrast to amended claims, the parties have more divergent views on the application of a written description requirement to original claims. Ariad argues that *Regents of the University of California v. Eli Lilly & Co.*, 119 F.3d 1559 (Fed. Cir. 1997), extended the requirement beyond its proper role of policing priority as part of enablement and transformed it into a heightened and unpredictable general disclosure requirement in place of enablement. Rather, Ariad argues, the requirement to describe what the invention is does not apply to original claims because original claims, as part of the original disclosure, constitute their own written description of the invention. Thus, according to Ariad, as long as the claim language appears *in ipsius verbis* in the specification as filed, the applicant has satisfied the requirement to provide a written description of the invention.

Lilly responds that the written description requirement applies to all claims and requires that the specification objectively demonstrate that the applicant actually invented — was in possession of — the claimed subject matter. Lilly argues that §112 contains no basis for applying a different standard to amended versus original claims and that applying a separate written description requirement to original claims keeps inventors from claiming beyond their inventions and thus encourages innovation in new technological areas by preserving patent protection for actual inventions.

Again we agree with Lilly. If it is correct to read §112, first paragraph, as containing a requirement to provide a separate written description of the invention, as we hold here, Ariad provides no principled basis for restricting that requirement to establishing priority. Certainly nothing in the language of §112 supports such a restriction; the statute does not say “The specification shall contain a written description of the invention *for purposes of determining priority*.” And although the issue arises primarily in cases involving priority, Congress has not so limited the statute, and neither will we.

Furthermore, while it is true that original claims are part of the original specification, that truism fails to address the question whether original claim language necessarily discloses the subject matter that it claims. Ariad believes so, arguing that original claims identify whatever they state, *e.g.*, a perpetual motion machine, leaving only the question whether the applicant has enabled anyone to make and use such an invention. We disagree that this is always the case. Although many original claims will satisfy the written description requirement, certain claims may not. For example, a generic claim may define the boundaries of a vast genus of chemical compounds, and yet the question may still remain whether the specification, including original claim language, demonstrates that the applicant has invented species sufficient to support a claim to a genus. The problem is especially acute with genus claims that use functional language to define the boundaries of a claimed genus. In such a case, the functional claim may simply claim a desired result, and may do so without describing species that achieve that result. But the specification must demonstrate that the applicant has made a generic invention that achieves the claimed result and do so by showing that the

applicant has invented species sufficient to support a claim to the functionally-defined genus.

We held [in *Eli Lilly*] that a sufficient description of a genus . . . requires the disclosure of either a representative number of species falling within the scope of the genus or structural features common to the members of the genus so that one of skill in the art can “visualize or recognize” the members of the genus. *Id.* at 1568-69. We explained that an adequate written description requires a precise definition, such as by structure, formula, chemical name, physical properties, or other properties, of species falling within the genus sufficient to distinguish the genus from other materials. We have also held that functional claim language can meet the written description requirement when the art has established a correlation between structure and function. But merely drawing a fence around the outer limits of a purported genus is not an adequate substitute for describing a variety of materials constituting the genus and showing that one has invented a genus and not just a species.

In fact, this case similarly illustrates the problem of generic claims. The claims here recite methods encompassing a genus of materials achieving a stated useful result, i.e., reducing NF-kB binding to NF-kB recognition sites in response to external influences. But the specification does not disclose a variety of species that accomplish the result.

## F.

Since its inception, this court has consistently held that §112, first paragraph, contains a written description requirement separate from enablement, and we have articulated a “fairly uniform standard,” which we now affirm. *Vas-Cath Inc. v. Mahurkar*, 935 F.2d 1555, 1562-63 (Fed. Cir. 1991). Specifically, the description must “clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed.” *Id.* at 1563 (citing *In re Gosteli*, 872 F.2d 1008, 1012 (Fed. Cir. 1989)). In other words, the test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date.

The term “possession,” however, has never been very enlightening. It implies that as long as one can produce records documenting a written description of a claimed invention, one can show possession. But the hallmark of written description is disclosure. Thus, “possession as shown in the disclosure” is a more complete formulation. Yet whatever the specific articulation, the test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art. Based on that inquiry, the specification must describe an invention understandable to that skilled artisan and show that the inventor actually invented the invention claimed.

This inquiry, as we have long held, is a question of fact. Thus, we have recognized that determining whether a patent complies with the written description

### 3. Patent Law

requirement will necessarily vary depending on the context. Specifically, the level of detail required to satisfy the written description requirement varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.

The law must be applied to each invention at the time it enters the patent process, for each patented advance has a novel relationship with the state of the art from which it emerges. Thus, we do not try here to predict and adjudicate all the factual scenarios to which the written description requirement could be applied. Nor do we set out any bright-line rules governing, for example, the number of species that must be disclosed to describe a genus claim, as this number necessarily changes with each invention, and it changes with progress in a field. *Compare Eli Lilly*, 119 F.3d at 1567 (holding an amino acid sequence did not describe the DNA sequence encoding it), *with In re Wallach*, 378 F.3d 1330, 1334 (Fed. Cir. 2004) (discussing how it is now a “routine matter” to convert an amino acid sequence into all the DNA sequences that can encode it). Thus, whatever inconsistencies may appear to some to exist in the application of the law, those inconsistencies rest not with the legal standard but with the different facts and arguments presented to the courts.

There are, however, a few broad principles that hold true across all cases. We have made clear that the written description requirement does not demand either examples or an actual reduction to practice; a constructive reduction to practice that in a definite way identifies the claimed invention can satisfy the written description requirement. *Falko-Gunter Falkner v. Inglis*, 448 F.3d 1357, 1366-67 (Fed. Cir. 2006). Conversely, we have repeatedly stated that actual “possession” or reduction to practice outside of the specification is not enough. Rather, as stated above, it is the specification itself that must demonstrate possession. And while the description requirement does not demand any particular form of disclosure, or that the specification recite the claimed invention *in haec verba*, a description that merely renders the invention obvious does not satisfy the requirement, *Lockwood v. Am. Airlines*, 107 F.3d 1565, 1571-72 (Fed. Cir. 1997).

We also reject the characterization, cited by Ariad, of the court’s written description doctrine as a “super enablement” standard for chemical and biotechnology inventions. The doctrine never created a heightened requirement to provide a nucleotide-by-nucleotide recitation of the entire genus of claimed genetic material; it has always expressly permitted the disclosure of structural features common to the members of the genus. It also has not just been applied to chemical and biological inventions. *See LizardTech, Inc. v. Earth Res. Mapping, Inc.*, 424 F.3d 1336, 1343-47 (Fed. Cir. 2005).

Perhaps there is little difference in some fields between describing an invention and enabling one to make and use it, but that is not always true of certain inventions, including chemical and chemical-like inventions. Thus, although written description and enablement often rise and fall together, requiring a written description of the invention plays a vital role in curtailing claims that do not require undue experimentation to make and use, and thus satisfy enablement, but that have not been invented, and thus cannot be described. For example, a propyl or butyl compound may be made by a process analogous to a disclosed



### 3. Patent Law

methyl compound, but, in the absence of a statement that the inventor invented propyl and butyl compounds, such compounds have not been described and are not entitled to a patent. See *In re DiLeone*, 58 C.C.P.A. 925, 436 F.2d 1404, 1405 n. 1 (1971) (“[C]onsider the case where the specification discusses only compound A and contains no broadening language of any kind. This might very well enable one skilled in the art to make and use compounds B and C; yet the class consisting of A, B and C has not been described.”).

The written description requirement also ensures that when a patent claims a genus by its function or result, the specification recites sufficient materials to accomplish that function—a problem that is particularly acute in the biological arts. This situation arose not only in *Eli Lilly* but again in *University of Rochester v. G.D. Searle & Co., Inc.*, 358 F.3d 916 (Fed. Cir. 2004). In *Rochester*, we held invalid claims directed to a method of selectively inhibiting the COX-2 enzyme by administering a non-steroidal compound that selectively inhibits the COX-2 enzyme. *Id.* at 918. We reasoned that because the specification did not describe any specific compound capable of performing the claimed method and the skilled artisan would not be able to identify any such compound based on the specification’s function description, the specification did not provide an adequate written description of the claimed invention. *Id.* at 927-28. Such claims merely recite a description of the problem to be solved while claiming all solutions to it and, as in *Eli Lilly* and Ariad’s claims, cover any compound later actually invented and determined to fall within the claim’s functional boundaries—leaving it to the pharmaceutical industry to complete an unfinished invention.

Ariad complains that the doctrine disadvantages universities to the extent that basic research cannot be patented. But the patent law has always been directed to the “useful Arts,” U.S. Const. art. I, §8, cl. 8, meaning inventions with a practical use, see *Brenner v. Manson*, 383 U.S. 519, 532-36, 86 S. Ct. 1033, 16 L. Ed. 2d 69 (1966). Much university research relates to basic research, including research into scientific principles and mechanisms of action, see, e.g., *Rochester*, 358 F.3d 916, and universities may not have the resources or inclination to work out the practical implications of all such research, i.e., finding and identifying compounds able to affect the mechanism discovered. That is no failure of the law’s interpretation, but its intention. Patents are not awarded for academic theories, no matter how groundbreaking or necessary to the later patentable inventions of others. “[A] patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion.” *Id.* at 930 n. 10 (quoting *Brenner*, 383 U.S. at 536, 86 S. Ct. 1033). Requiring a written description of the invention limits patent protection to those who actually perform the difficult work of “invention”—that is, conceive of the complete and final invention with all its claimed limitations—and disclose the fruits of that effort to the public.

That research hypotheses do not qualify for patent protection possibly results in some loss of incentive, although Ariad presents no evidence of any discernable impact on the pace of innovation or the number of patents obtained by universities. But claims to research plans also impose costs on downstream research, discouraging later invention. The goal is to get the right balance, and the written description doctrine does so by giving the incentive to actual invention and not



### 3. Patent Law

“attempt[s] to preempt the future before it has arrived.” *Fiers*, 984 F.2d at 1171. It is part of the *quid pro quo* of the patent grant and ensures that the public receives a meaningful disclosure in exchange for being excluded from practicing an invention for a period of time.

## II.

Because we reaffirm our written description doctrine, we see no reason to deviate from the panel’s application of that requirement to the facts of this case. As such, we adopt that analysis, as follows, as the decision of the *en banc* court.

### A.

We review the denial of Lilly’s motion for JMOL without deference.

Ariad explains that developing the subject matter of the ’516 patent “required years of hard work, great skill, and extraordinary creativity — so much so that the inventors first needed to discover, give names to, and describe previously unknown cellular components as a necessary predicate for their inventions.” Thus, this invention was made in a new and unpredictable field where the existing knowledge and prior art was scant.

### B.

Ariad claims methods comprising the single step of reducing NF-kB activity. Lilly argues that the asserted claims are not supported by a written description because the specification of the ’516 patent fails to adequately disclose how the claimed reduction of NF-kB activity is achieved. The parties agree that the specification of the ’516 patent hypothesizes three classes of molecules potentially capable of reducing NF-kB activity: specific inhibitors, dominantly interfering molecules, and decoy molecules. Lilly contends that this disclosure amounts to little more than a research plan, and does not satisfy the patentee’s *quid pro quo* as described in *Rochester*. Ariad responds that Lilly’s arguments fail as a matter of law because Ariad did not actually claim the molecules. According to Ariad, because there is no term in the asserted claims that corresponds to the molecules, it is entitled to claim the methods without describing the molecules. Ariad’s legal assertion, however, is flawed.

In *Rochester*, as discussed above, we held very similar method claims invalid for lack of written description. 358 F.3d at 918-19 (holding the patent invalid because “Rochester did not present any evidence that the ordinarily skilled artisan would be able to identify any compound based on [the specification’s] vague functional description”). . . . Ariad attempts to categorically distinguish *Rochester*, *Fiers*, and *Eli Lilly*, because in those cases, the claims explicitly included the non-described

compositions. For example, in *Rochester*, the method claims recited a broad type of compound that we held was inadequately described in the specification of the patent:

1. A method for selectively inhibiting PGHS-2 activity in a human host, comprising administering a non-steroidal compound that selectively inhibits activity of the PGHS-2 gene product to a human host in need of such treatment.

*Id.* at 918. Ariad's attempt to distinguish these cases is unavailing. Regardless whether the asserted claims recite a compound, Ariad still must describe some way of performing the claimed methods, and Ariad admits that the specification suggests only the use of the three classes of molecules to achieve NF-kB reduction. Thus, to satisfy the written description requirement for the asserted claims, the specification must demonstrate that Ariad possessed the claimed methods by sufficiently disclosing molecules capable of reducing NF-kB activity. . . .

### C.

Alternatively, Ariad argues that the specification of the '516 patent and the expert testimony of Tom Kadesch provided the jury with substantial evidence of adequate written description of the claimed methods.

Specific inhibitors are molecules that are "able to block (reduce or eliminate) NF-kB binding" to DNA in the nucleus. '516 patent col. The only example of a specific inhibitor given in the specification is I-kB, a naturally occurring molecule whose function is to hold NF-kB in an inactive state until the cell receives certain external influences. Nearly all of Ariad's evidence regarding the disclosure of I-kB relies upon figure 43. Ariad's expert, Dr. Kadesch, testified that figure 43 discloses the sequence of DNA that encodes I-kB and relied on this disclosure with regard to his opinion that the written description requirement was satisfied by disclosure of specific inhibitor molecules. But as Ariad admits, figure 43 was not disclosed until 1991. Because figure 43 was not in the 1989 application, neither it nor Dr. Kadesch's testimony regarding it can offer substantial evidence for the jury determination. The only other testimony of Dr. Kadesch with regard to I-kB was that it existed in 1989 and that one of ordinary skill could through experimentation isolate natural I-kB. In the context of this invention, a vague functional description and an invitation for further research does not constitute written disclosure of a specific inhibitor.

Dominantly interfering molecules are "a truncated form of the NF-kB molecule." The truncation would "retain[ ] the DNA binding domain, but lack[ ] the RNA polymerase activating domain." As such, the dominantly interfering molecule "would recognize and bind to the NF-KB binding site [on nuclear DNA], however, the binding would be unproductive." In other words, the dominantly interfering molecules would block natural NF-kB from inducing the expression of its target genes. The specification provides no example molecules of this class. Moreover, the specification acknowledges that dominantly interfering molecules

### 3. Patent Law

can work only “if the DNA binding domain and the DNA polymerase domain of NF- $\kappa$ B are spatially distinct in the molecule.” The jury also heard Dr. Kadesch’s testimony that “it is a fair representation” that “the ’516 patent itself doesn’t disclose in its text that the DNA binding domain and the RNA preliminary activating domain of NF- $\kappa$ B are, in fact, separable or spatially distinct.” Considering that the inventors of the ’516 patent discovered NF- $\kappa$ B, if they did not know whether the two domains are distinct, one of ordinary skill in the art was at best equally ignorant.

Decoy molecules are “designed to mimic a region of the gene whose expression would normally be induced by NF- $\kappa$ B. In this case, NF- $\kappa$ B would bind the decoy, and thus, not be available to bind its natural target.” Like the other two classes of molecules, decoy molecules are presented hypothetically, but unlike the other two classes of molecules, the specification proposes example structures for decoy molecules. As Dr. Kadesch explained, decoy molecules are DNA oligonucleotides, and because the specification discloses specific example sequences, there is little doubt that the specification adequately described the actual molecules to one of ordinary skill in the art. Yet this does not answer the question whether the specification adequately describes using those molecules to reduce NF- $\kappa$ B activity. The full extent of the specification’s disclosure of a method that reduces NF- $\kappa$ B activity using decoy molecules is that NF- $\kappa$ B “would bind the decoy” and thereby, “negative regulation can be effected.” Prophetic examples are routinely used in the chemical arts, and they certainly can be sufficient to satisfy the written description requirement. But this disclosure is not so much an “example” as it is a mere mention of a desired outcome. As Dr. Latchman pointed out, there is no descriptive link between the table of decoy molecules and reducing NF- $\kappa$ B activity.

## Conclusion

For the foregoing reasons, we hold that the asserted claims of the ’516 patent are invalid for lack of written description, and we do not address the other validity issues that were before the panel.

### *REVERSED IN PART AND AFFIRMED IN PART*

NEWMAN, Circuit Judge, additional views.

I join the court’s opinion. However, I write separately because the real issue of this case is too important to be submerged in rhetoric. The issue was recognized by Ariad, who complained that the written description requirement “has severe adverse consequences for research universities” because it prevents the patenting of “the type of discoveries that universities make,” that is, it prevents the patenting of basic scientific research.

Basic scientific principles are not the subject matter of patents, while their application is the focus of this law of commercial incentive. The role of the patent system is to encourage and enable the practical applications of scientific advances,

### 3. Patent Law

through investment and commerce. Although Ariad points out that “basic patents” of broad scope are well recognized, several amici point out that in no case has an invention of basic science been patented with not even one embodiment demonstrating its application and illustrating its breadth. Lilly points out that the specification herein demonstrates none of the three methods that are suggested for possible use to reduce NF-kB activity in cells.

GAJARSA, Circuit Judge, concurring.

I join the opinion of the court, but write separately to explain my reasons for doing so. In my judgment, the text of §112, ¶1 is a model of legislative ambiguity. The interpretation of the statute, therefore, is one over which reasonable people can disagree, and indeed, reasonable people have so disagreed for the better part of a decade. While not entirely free from doubt, the majority’s interpretation of §112, ¶1 is reasonable, and for the need to provide some clarity to this otherwise conflicting area of our law, I concur with the majority’s opinion that the statute may be interpreted to set forth an independent written description requirement.

I disagree, however, with those who view an independent written description requirement as a necessity of patent law. . . . Empirical evidence demonstrates that outside the priority context the written description doctrine seldom serves as a separate vehicle for invalidating claims. *See, e.g.,* Dennis Crouch, *An Empirical Study of the Role of the Written Description Requirement in Patent Prosecution* 12 (Univ. of Mo. Sch. Of Law Legal Studies Research Paper No.2010-06, 2000), *available at* <http://ssrn.com/abstract=1554949> (analyzing 2858 Board of Patent Appeals and Interference patent opinions decided between January and June 2009 and finding “none of the outcomes of those decisions would have been impacted by a hypothetical change that eliminated the written description requirement so long as new matter rejections were still allowed under the same standard available today”); Christopher Holman, *Is Lilly Written Description a Paper Tiger?: A Comprehensive Assessment of the Impact of Eli Lilly and its Progeny in the Courts and PTO*, 17 Alb. L.J. Sci. & Tech. 1, 26-78 (2007) (analyzing Federal Circuit, district court, and BPAI cases since *Regents of the University of California v. Eli Lilly & Co.*, 119 F.3d 1559 (Fed. Cir. 1997), and finding only a small number of cases that invalidated a claim for failure to satisfy the written description requirement).

The empirical evidence confirms my belief that written description serves little practical purpose as an independent invalidity device and better serves the goals of the Patent Act when confined to the priority context. As a matter of statutory interpretation, however, we cannot limit the written description only to priority cases, but Congress could establish such a limit by statute. Confining written description to the priority context would provide greater clarity to district courts and practitioners, both of whom are currently left to trudge through a thicket of written description jurisprudence that provides no conclusive answers and encourages a shotgun approach to litigation. Yet, this thicket is the result of our best efforts to construe an ambiguous statute; only Congress wields the machete to clear it.

RADER, Circuit Judge, with whom LINN, Circuit Judge, joins, dissenting-in-part and concurring-in-part.

### 3. Patent Law

The Constitution of the United States gives Congress, not the courts, the power to promote the progress of the useful arts by securing exclusive rights to inventors for limited times. Art. I, §8, cl. 8. Yet this court proclaims itself the body responsible for achieving the “right balance” between upstream and downstream innovation. Ante at 1353. The Patent Act, however, has already established the balance by requiring that a patent application contain “a written description of the invention, and of the manner and process of making and using it, *in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains . . . to make and use the same.*” 35 U.S.C. §112, ¶1 (emphasis added). In rejecting that statutory balance in favor of an undefined “written description” doctrine, this court ignores the problems of standardless decision making and serious conflicts with other areas of patent law. Because the Patent Act already supplies a better test, I respectfully dissent.

#### I.

The frailties of this court’s “written description” doctrine have been exhaustively documented in previous opinions. These earlier writings document the embarrassingly thin (perhaps even mistaken) justifications for the minting of this new description doctrine in 1997 and the extensive academic criticism of this product of judicial imagination. For present purposes I will only recount those frailties of this court’s relatively recent justifications for a doctrine of its own making. First and foremost, the separate written description requirement that the court petrifies today has no statutory support. As noted, §112, first paragraph . . . says that the written descriptions of the invention and of the manner and process of making and using the invention are both judged by whether they are in such full, clear, concise, and exact terms as to enable a person skilled in the art to make and use the invention. The reason for a description doctrine is clear: to ensure that the inventor fully discloses the invention in exchange for an exclusive right. The test for the adequacy of the specification that describes the invention is also clear: Is the description sufficient to enable a person of ordinary skill in the art to make and use the claimed invention? Nowhere does the paragraph require that the inventor satisfy some quixotic possession requirement.

This court, however, calves the “written description of the invention” language out of its context in the rest of the paragraph. In this court’s strained reading, the prepositional phrases that follow apply only to a “written description . . . of the manner and process of making and using” the invention, not to a “written description of the invention.” The practical effect of the court’s interpretation is that the written description of the invention contained in the specification need not be full. It need not be clear. It need not be concise. It need not be exact. And, of course, it need not enable. Instead, it must satisfy a vague possession notion.

If Congress had intended enablement to test only the sufficiency of the written description of the manner and process of making and using the invention, then it would have simply required “a written description . . . of the manner and process

### 3. Patent Law

of making and using it in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to *do so*.” Note also that the comma after “it” in the statute as written is meaningless under the court’s interpretation.

In reality, the court simply sidesteps the conflict between its position and the language of the statute by suggesting that Supreme Court precedent has settled this issue. *Ante* at 1344-45. Of course, that is a question for the Supreme Court to answer, but reading the statute as it is written is in fact fully consistent with cases like *Schriber-Schroth Co. v. Cleveland Trust Co.*, 305 U.S. 47, 59 S. Ct. 8, 83 L. Ed. 34 (1938).

Specifically, the description doctrine under a correct reading of the statute shows that a specification satisfies the “written description of the invention” requirement when it tells a person of skill in the art what the invention is. In other words, a proper reading of the statutory description requirement recognizes that the enablement requirement identifies the invention and tells a person of ordinary skill *what* to make and use. The [Supreme Court] cases stand only for the unremarkable proposition that an applicant cannot add new matter to an original disclosure.

[T]his court’s new creation offers the public nothing more in exchange for a patent than the statutory enablement requirement already ensures. As the Supreme Court explains, the “*quid pro quo* [for a patent monopoly] is disclosure of a process or device in sufficient detail *to enable one skilled in the art to practice the invention once the period of the monopoly has expired*.” *Universal Oil Prods. Co. v. Globe Oil & Ref. Co.*, 322 U.S. 471, 484 (1944) (emphasis added). What “teaching function,” *Ariad*, 560 F.3d at 1370 (quoting *Univ. of Rochester*, 358 F.3d at 922), does the court propagate by telling an inventor that a patent application must show “possession as shown in the disclosure,” whatever that means? Inventors, to my knowledge, are always quite certain that they possess their invention.

## II.

“A ‘blocking patent’ is an earlier patent that must be licensed in order to practice a later patent. This often occurs, for instance, between a pioneer patent and an improvement patent.” *Prima Tek II, L.L.C. v. A-Roo Co.*, 222 F.3d 1372, 1379 n. 2 (Fed. Cir. 2000). The Supreme Court has long acknowledged the “well established” rule that “an improver cannot appropriate the basic patent of another and that the improver without a license is an infringer and may be sued as such.” *Temco Elec. Motor Co. v. Apco Mfg. Co.*, 275 U.S. 319, 328 (1928). This blocking condition can exist even where the original patentee “failed to contemplate” an additional element found in the improvement patent. *A.B. Dick Co. v. Burroughs Corp.*, 713 F.2d 700, 703 (Fed. Cir. 1983).

Blocking conditions conceivably occur often where a pioneering patent claims a genus and an improvement patent later claims a species of that genus. These blocking patents often serve the market well by pressuring both inventors to license their innovations to each other and beyond.

### 3. Patent Law

After *Eli Lilly*, however, the value of these blocking situations will disappear unless the pioneering patentee “possessed,” yet for some reason chose not to claim, the improvement. That situation, of course, would rarely, if ever, happen. Unfortunately the new *Eli Lilly* doctrine effectively prevents this long-standing precept of patent law. For example, although “[i]mprovement and selection inventions are ubiquitous in patent law; such developments do not cast doubt on enablement of the original invention,” *CFMT, Inc. v. Yieldup Int’l Corp.*, 349 F.3d 1333, 1340 (Fed. Cir. 2003), they apparently do cast doubt on the written description of the original invention. Without this new rule, downstream and upstream innovators in this case would have benefited from the ability to cross license. Under the new regime, mere improvements will likely invalidate genus patents. The principle of unintended consequences once again counsels against judicial adventurism.

## III.

Under this new doctrine, patent applicants will face a difficult burden in discerning proper claiming procedure under this court’s unpredictable written description of the invention requirement. The court talks out of both sides of its mouth as it lays out the test. On the one hand, the test seems to require the fact finder to make a subjective inquiry about what the inventor possessed. *Ante* at 1350-51. On the other, the court states that the test requires an objective inquiry into the four corners of the specification from the perspective of a person of ordinary skill in the art. But a test becomes no less subjective merely because it asks a fact finder to answer the subjective question objectively. This court still asks the fact finder to imagine what a person of skill in the art would have understood the inventor to have subjectively possessed based on the description in the specification (which of course by definition describes the exact same invention according to this court’s claim construction rules).

### ***B. The Majority’s Proposed Written Description Test***

I credit the majority for acknowledging that the “possession” test “has never been very enlightening” and for attempting to clarify that “possession as shown in the disclosure” should be an “objective inquiry into the four-corners of the specification.” *Maj. Op.* at 1351. Yet, given the court’s concern for public notice, the opinion fails to set the boundaries for compliance with its separate written description test.

The language that the majority uses to explain “possession as shown in the disclosure” not only fails to justify a separate test, it also fails to distinguish the test for written description from the requirements for enablement. “[T]he level of detail required to satisfy the written description requirement,” according to the majority, “varies depending on the nature and scope of the claims and on the complexity and predictability of the relevant technology.” *Maj. Op.* at 1351. These



### 3. Patent Law

considerations, however, mirror the *Wands* factors for enablement, which include “the nature of the invention,” “the breadth of the claims,” and “the predictability or unpredictability of the art.” 858 F.2d at 737. The court attempts to distinguish enablement by observing that “although written description and enablement often rise and fall together, requiring a written description of the invention plays a vital role in curtailing claims that do not require undue experimentation to make and use, and thus satisfy enablement, but that *have not been invented*, and thus cannot be described.” *Maj. Op.* at 1352 (emphasis added). Yet, if a person of ordinary skill is enabled to make and use a novel and nonobvious invention clearly recited in the claims, I fail to see how that invention can be said to “have not been invented” or be in need of some undefined level of additional description.

In my view, the question before the en banc court should have been answered in the negative and the appeal returned to the panel for resolution of the enablement question and Lilly’s remaining invalidity and noninfringement defenses.

### Notes

1. The basic issue resolved in *Ariad* is the difference between describing an invention and teaching about it. There *is* a difference, the majority holds, and the difference has its basis in the Patent Act. The long-running dispute between a minority faction of the Federal Court, which had resisted a separate written description requirement, and the majority, appears to be over. Unless the Supreme Court intervenes, the written description requirement is and will remain a fixture in U.S. patent law.

2. While there is nothing in the opinion stating that the written description requirement applies only to some types of inventions (e.g., biotechnology and chemistry), the court hints at the origins of the recent written description cases in the following terms:

For example, a generic claim may define the boundaries of a vast genus of chemical compounds, and yet the question may still remain whether the specification, including original claim language, demonstrates that the applicant has invented species sufficient to support a claim to a genus. The problem is especially acute with genus claims that use functional language to define the boundaries of a claimed genus. In such a case, the functional claim may simply claim a desired result, and may do so without describing species that achieve that result. But the specification must demonstrate that the applicant has made a generic invention that achieves the claimed result and do so by showing that the applicant has invented species sufficient to support a claim to the functionally-defined genus.

*Ariad*, 598 F.3d 1336, 1349. The conflict in this area may stem in part at least from the very liberal enablement standard in chemical cases (which is implicit in this passage), coupled with aggressive claims to functional entities, such as the mechanism claimed in the *Ariad* case itself.

### 3. Patent Law

*Insert at the end of Note 5, Page 235, at the end of Griffith v. Kanamaru:*

The 2009 Bill led directly to the America Invents Act of 2011, S. 23, passed by Senate March 8, 2011 (112th Cong., 2011); H.R. 1249 (introduced in the U.S. House of Representatives, March 30, 2011) (112th Cong., 2011). Section 3 of the Act embodies the first to file principle; it states:

3(a) NOVELTY; PRIOR ART. — A person shall be entitled to a patent unless —  
(1) the claimed invention was patented, described in a printed publication, or in public use, on sale, or otherwise available to the public before the effective filing date of the claimed invention. . . .

One issue that was raising concern as this book went to press was the status of “grace period” under section 3. As under current law, the Act envisions a grace period after the occurrence of prior art events (e.g., technical publications containing the information claimed in a patent application, sale of devices embodying the claimed invention, etc.). Unfortunately, the wording of the grace period raised concerns that certain categories of prior art events, protected by a grace period under current law, would not longer be protected under the Act’s grace period. The specific issue comes from section 3(b):

(b) EXCEPTIONS. —  
(1) DISCLOSURES MADE 1 YEAR OR LESS BEFORE THE EFFECTIVE FILING DATE OF THE CLAIMED INVENTION. — A disclosure made 1 year or less before the effective filing date of a claimed invention shall not be prior art to the claimed invention under subsection (a)(1) if—  
(A) the disclosure was made by the inventor or joint inventor or by another who obtained the subject matter disclosed directly or indirectly from the inventor or a joint inventor. . . .

The problem is the word “disclosure.” Devices sold under confidentiality agreements might not be considered “disclosures” by some, which would mean that such sales made any time prior to the filing of a patent application could render the patent invalid. Only prior “disclosures” are protected by the grace period, in other words, and confidential sales might not be considered “disclosures.” While there is a strong argument given the legislative history that the drafters of the Act intended to create a broad grace period coextensive with the traditional grace period under existing law and the broad traditional meaning of “disclosure” in patent law, some worry that the wording of the Act may bring unnecessary complications to the advent of a first to file regime in the U.S.

*Insert new final paragraph at the end of the text on page 338 (end of the “Note on Inducement” which begins on p. 337):*

The complexities of intent were central to the Supreme Court’s 2011 opinion in *Global-Tech Appliances, Inc. v. SEB, Inc.*, 2011 WL 2119109 (No. 10-6, U.S.

### 3. Patent Law

Supreme Court, May 31, 2011), where the Court (1) affirmed the longstanding requirement that infringement liability for inducement requires that the inducing party have knowledge of a patent and of the fact that its actions will infringe that patent, but (2) created new law by holding that an inducing party satisfies the knowledge requirement when it engages in “willful blindness” regarding a patent. In the *Global-Tech* case, the patentee SEB had designed a superior deep fryer, which was, at the request of a U.S. competitor of SEB, copied by Pentalpha, a division of Global-Tech. After the design was copied, Pentalpha asked a U.S. patent attorney to conduct a “right to use” study – that is, a comparison of the Pentalpha product against U.S. patents in the field of deep fryers. Pentalpha did not tell the patent attorney that its product was derived from the SEB design, however; nor was the patent attorney told about the SEB patent that covered its fryer design. The patent attorney did not discover the SEB patent independently, which was one reason that Pentalpha was told that its product did not appear to infringe any U.S. patents. On the strength of this report, Pentalpha entered the market in competition with SEB, which led in turn to a patent infringement suit by SEB against Pentalpha and Global-Tech.

On the specific issue of inducement, the Court began by noting the common origins of §271(b) (inducement) and §271(c) (contributory infringement):

[I]nduced infringement was not considered a separate theory of indirect liability in the pre-1952 case law. Rather, it was treated as evidence of “contributory infringement,” that is, the aiding and abetting of direct infringement by another party. See Lemley, *Inducing Patent Infringement*, 39 U.C.D.L. Rev. 225, 227 (2005). When Congress enacted §271, it separated what had previously been regarded as contributory infringement into two categories, one covered by §271(b) and the other covered by §271(c).

*Global-Tech Appliances*, supra, 2011 WL 2119109, at 6. After affirming the accepted understanding that both inducement and contributory infringement require knowledge that there is a patent and that it covers the intended activities, the Court turned to the “deliberate indifference” standard that the Federal Circuit had used in reaching its conclusion that Pentalpha/Global-Tech had in fact induced infringement of SEB’s patent. See *SEB S.A. v. Montgomery Ward & Co., Inc.*, 594 F.3d 1360 (Fed. Cir. 2010) (opinion below). According to the Supreme Court, “[W]e agree that deliberate indifference to a known risk that a patent exists is not the appropriate standard under §271(b). We nevertheless affirm the judgment of the Court of Appeals because the evidence in this case was plainly sufficient to support a finding of Pentalpha’s knowledge under the doctrine of willful blindness.” 2011 WL 2119109, at 7. Under the doctrine of willful blindness, common in criminal law:

[D]efendants cannot escape the reach of [criminal] statutes [requiring intent or knowledge] by deliberately shielding themselves from clear evidence of critical facts that are strongly suggested by the circumstances. The traditional rationale for this doctrine is that defendants who behave in this manner are just as culpable as those who have actual knowledge. . . . It is also said that persons who know enough to blind themselves to

### 3. Patent Law

direct proof of critical facts in effect have actual knowledge of those facts. See *United States v. Jewell*, 532 F.2d 697, 700 (C.A.9 1976) (en banc).

The Court emphasized that this willful blindness exception was quite narrow, and that the scienter standard it required was “beyond recklessness or negligence” and more akin to circumstantial evidence of actual knowledge. Applying this standard, the Court found that when Pentalpha/Global-Tech withheld information about the SEB design and patent from the attorney who did the right to use study, Pentalpha/Global-Tech had willfully blinded itself to the knowledge that it was infringing. This was enough, under the facts here, to constitute knowledge, and hence the Supreme Court affirmed the Federal Circuit’s finding of inducement to infringe. Justice Kennedy, the lone dissenter in the case, pointed out that willful blindness was not quite the same as actual knowledge. *Global-Tech*, supra, 2011 WL 2119109, at 10 et seq. But the other eight justices had no trouble finding that the two were equivalent for purposes of inducement liability.

*Insert New Note 1 after Kingsdown Medical Consultants Ltd., page 351; renumber existing notes as notes 2 and 3:*

1. The important subsequent case of *Therasense, Inc. v. Becton, Dickinson & Co.*, 2011 WL 2028255 (Nos. 2008–1511, 2008–1512, 2008–1513, 2008–1514, 2008–1595, Fed. Cir., May 25, 2011) (en banc), expanded and in some ways modified the holding in *Kingsdown Medical*. As in *Kingsdown Medical*, the central motivation was to tighten the test for inequitable conduct, to cut down on the number of cases in which this defense can be effectively argued. Also as in *Kingsdown*, the focus of the Federal Circuit’s attention was on the dual requirements of intent and materiality, and the relationship between the two. The court found first that a misrepresentation or omission by a patent applicant that amounts to gross negligence or negligence under a “should have known” standard does *not* satisfy the inequitable conduct intent requirement—a finding that ran counter to a number of prior Federal Circuit cases. The en banc majority next eliminated the “sliding scale” approach under which a high degree of materiality can offset a low level of intent. The court replaced this test with one under which each of the two requirements must be independently satisfied, a holding which has the important effect of placing evidence of intent at the center of inequitable conduct analysis. Next the court stated that to meet the clear and convincing evidence standard, the specific intent to deceive must be the single most reasonable inference able to be drawn from the evidence of the applicant’s behavior, and therefore that when there are multiple reasonable inferences that may be drawn from the applicant’s conduct, no intent to deceive will be found. The court then addressed the respective evidentiary burdens on the parties. Under its approach, the majority stated that the patentee is not required to introduce justificatory evidence regarding its conduct during prosecution unless and until the accused infringer proves a threshold level of intent to

### 3. Patent Law

deceive by clear and convincing evidence. Finally the court turned to the issue of materiality:

In the past, this court has tried to address the proliferation of inequitable conduct charges by raising the intent standard alone. In *Kingsdown*, this court made clear that gross negligence alone was not enough to justify an inference of intent to deceive. 863 F.2d at 876. *Kingsdown* established that “the involved conduct . . . must indicate sufficient culpability to *require* a finding of intent to deceive.” Id. (emphasis added). This higher intent standard, standing alone, did not reduce the number of inequitable conduct cases before the courts and did not cure the problem of overdisclosure of marginally relevant prior art to the PTO. To address these concerns, this court adjusts as well the standard for materiality.

Thrasense, Inc., *supra*, 2011 WL 2028255, at 11. The court went on to hold that the materiality required to establish inequitable conduct is “but-for” materiality.

Given the court’s limitations on evidence of intent, will it ever be possible to prove inequitable conduct? What kinds of evidence would suffice?

---

## 5 Trademark Law

---

*Insert at p. 878 at the beginning of chapter 6, replacing the first four paragraphs of that section:*

===== **TIFFANY (NJ) INC. v. eBAY INC.**  
===== *United States Court of Appeals for the Second Circuit.*  
===== *\_\_\_\_\_ F.3d \_\_\_\_\_ (2d Cir. 2010)*

SACK, Circuit Judge:

eBay, Inc. (“eBay”), through its eponymous online marketplace, has revolutionized the online sale of goods, especially used goods. It has facilitated the buying and selling by hundreds of millions of people and entities, to their benefit and eBay’s profit. But that marketplace is sometimes employed by users as a means to perpetrate fraud by selling counterfeit goods.

Plaintiffs Tiffany (NJ) Inc. and Tiffany and Company (together, “Tiffany”) have created and cultivated a brand of jewelry bespeaking high-end quality and style. Based on Tiffany’s concern that some use eBay’s website to sell counterfeit Tiffany merchandise, Tiffany has instituted this action against eBay, asserting various causes of action-sounding in trademark infringement, trademark dilution and false advertising — arising from eBay’s advertising and listing practices. For the reasons set forth below, we affirm the district court’s judgment with respect to Tiffany’s claims of trademark infringement and dilution but remand for further proceedings with respect to Tiffany’s false advertising claim.

### Background

...

*eBay*

eBay is the proprietor of [www.ebay.com](http://www.ebay.com), an Internetbased marketplace that allows those who register with it to purchase goods from and sell goods to one

another. It “connect[s] buyers and sellers and [ ] enable[s] transactions, which are carried out directly between eBay members.” *Tiffany*, 576 F.Supp.2d at 475. In its auction and listing services, it “provides the venue for the sale [of goods] and support for the transaction[s], [but] it does not itself sell the items” listed for sale on the site, *id.* at 475, nor does it ever take physical possession of them, *id.* Thus, “eBay generally does not know whether or when an item is delivered to the buyer.” *Id.*

eBay has been enormously successful. More than six million new listings are posted on its site daily. *Id.* At any given time it contains some 100 million listings. *Id.*

eBay generates revenue by charging sellers to use its listing services. For any listing, it charges an “insertion fee” based on the auction’s starting price for the goods being sold and ranges from \$0.20 to \$4.80. *Id.* For any completed sale, it charges a “final value fee” that ranges from 5.25% to 10% of the final sale price of the item. *Id.* Sellers have the option of purchasing, at additional cost, features “to differentiate their listings, such as a border or bold-faced type.” *Id.*

...

### *Tiffany*

Tiffany is a world-famous purveyor of, among other things, branded jewelry. *Id.* at 471-72. Since 2000, all new Tiffany jewelry sold in the United States has been available exclusively through Tiffany’s retail stores, catalogs, and website, and through its Corporate Sales Department. *Id.* at 472-73. It does not use liquidators, sell overstock merchandise, or put its goods on sale at discounted prices. *Id.* at 473. It does not — nor can it, for that matter — control the “legitimate secondary market in authentic Tiffany silvery jewelry,” i.e., the market for second-hand Tiffany wares. *Id.* at 473. The record developed at trial “offere[d] little basis from which to discern the actual availability of authentic Tiffany silver jewelry in the secondary market.” *Id.* at 474.

Sometime before 2004, Tiffany became aware that counterfeit Tiffany merchandise was being sold on eBay’s site. Prior to and during the course of this litigation, Tiffany conducted two surveys known as “Buying Programs,” one in 2004 and another in 2005, in an attempt to assess the extent of this practice. Under those programs, Tiffany bought various items on eBay and then inspected and evaluated them to determine how many were counterfeit. *Id.* at 485. Tiffany found that 73.1% of the purported Tiffany goods purchased in the 2004 Buying Program and 75.5% of those purchased in the 2005 Buying Program were counterfeit. *Id.* The district court concluded, however, that the Buying Programs were “methodologically flawed and of questionable value,” *id.* at 512, and “provide[d] limited evidence as to the total percentage of counterfeit goods available on eBay at any given time,” *id.* at 486. The court nonetheless decided that during the period in which the Buying Programs were in effect, a “significant portion of the ‘Tiffany’ sterling silver jewelry listed on the eBay website . . . was counterfeit,” *id.*, and that eBay knew “that some portion of the Tiffany goods sold on its website might be counterfeit,” *id.* at 507. The court found, however, that “a substantial number of authentic Tiffany goods are [also] sold on eBay.” *Id.* at 509.



## 5. Trademark Law

...

### *Anti-Counterfeiting Measures*

Because eBay facilitates many sales of Tiffany goods, genuine and otherwise, and obtains revenue on every transaction, it generates substantial revenues from the sale of purported Tiffany goods, some of which are counterfeit. “eBay’s Jewelry & Watches category manager estimated that, between April 2000 and June 2004, eBay earned \$4.1 million in revenue from completed listings with ‘Tiffany’ in the listing title in the Jewelry & Watches category.” *Id.* at 481. Although eBay was generating revenue from all sales of goods on its site, including counterfeit goods, the district court found eBay to have “an interest in eliminating counterfeit Tiffany merchandise from eBay . . . to preserve the reputation of its website as a safe place to do business.” *Id.* at 469. The buyer of fake Tiffany goods might, if and when the forgery was detected, fault eBay. Indeed, the district court found that “buyers . . . complain[ed] to eBay” about the sale of counterfeit Tiffany goods. *Id.* at 487. “[D]uring the last six weeks of 2004, 125 consumers complained to eBay about purchasing ‘Tiffany’ items through the eBay website that they believed to be counterfeit.” *Id.*

Because eBay “never saw or inspected the merchandise in the listings,” its ability to determine whether a particular listing was for counterfeit goods was limited. *Id.* at 477-78. Even had it been able to inspect the goods, moreover, in many instances it likely would not have had the expertise to determine whether they were counterfeit. *Id.* at 472 n. 7 (“[I]n many instances, determining whether an item is counterfeit will require a physical inspection of the item, and some degree of expertise on the part of the examiner.”).

Notwithstanding these limitations, eBay spent “as much as \$20 million each year on tools to promote trust and safety on its website.” *Id.* at 476. For example, eBay and PayPal set up “buyer protection programs,” under which, in certain circumstances, the buyer would be reimbursed for the cost of items purchased on eBay that were discovered not to be genuine. *Id.* at 479. eBay also established a “Trust and Safety” department, with some 4,000 employees “devoted to trust and safety” issues, including over 200 who “focus exclusively on combating infringement” and 70 who “work exclusively with law enforcement.” *Id.* at 476.

By May 2002, eBay had implemented a “fraud engine,” “which is principally dedicated to ferreting out illegal listings, including counterfeit listings.” *Id.* at 477. eBay had theretofore employed manual searches for keywords in listings in an effort to “identify blatant instances of potentially infringing . . . activity.” *Id.* “The fraud engine uses rules and complex models that automatically search for activity that violates eBay policies.” *Id.* In addition to identifying items actually advertised as counterfeit, the engine also incorporates various filters designed to screen out less-obvious instances of counterfeiting using “data elements designed to evaluate listings based on, for example, the seller’s Internet protocol address, any issues associated with the seller’s account on eBay, and the feedback the seller has received from other eBay users.” *Id.* In addition to general filters, the fraud engine incorporates “Tiffany-specific filters,” including “approximately 90 different keywords” designed to help distinguish between genuine and counterfeit Tiffany

goods. *Id.* at 491. During the period in dispute, eBay also “periodically conducted [manual] reviews of listings in an effort to remove those that might be selling counterfeit goods, including Tiffany goods.” *Id.*

For nearly a decade, including the period at issue, eBay has also maintained and administered the “Verified Rights Owner (‘VeRO’) Program” — a “‘notice-and-takedown’ system” allowing owners of intellectual property rights, including Tiffany, to “report to eBay any listing offering potentially infringing items, so that eBay could remove such reported listings.” *Id.* at 478. Any such rights-holder with a “good-faith belief that [a particular listed] item infringed on a copyright or a trademark” could report the item to eBay, using a “Notice Of Claimed Infringement form or NOCI form.” *Id.* During the period under consideration, eBay’s practice was to remove reported listings within twenty-four hours of receiving a NOCI, but eBay in fact deleted seventy to eighty percent of them within twelve hours of notification. *Id.*

On receipt of a NOCI, if the auction or sale had not ended, eBay would, in addition to removing the listing, cancel the bids and inform the seller of the reason for the cancellation. If bidding had ended, eBay would retroactively cancel the transaction. *Id.* In the event of a cancelled auction, eBay would refund the fees it had been paid in connection with the auction. *Id.* at 478-79.

In some circumstances, eBay would reimburse the buyer for the cost of a purchased item, provided the buyer presented evidence that the purchased item was counterfeit. *Id.* at 479. During the relevant time period, the district court found, eBay “never refused to remove a reported Tiffany listing, acted in good faith in responding to Tiffany’s NOCIs, and always provided Tiffany with the seller’s contact information.” *Id.* at 488.

In addition, eBay has allowed rights owners such as Tiffany to create an “About Me” webpage on eBay’s website “to inform eBay users about their products, intellectual property rights, and legal positions.” *Id.* at 479. eBay does not exercise control over the content of those pages in a manner material to the issues before us.

Tiffany, not eBay, maintains the Tiffany “About Me” page. With the headline “**BUYER BEWARE,**” the page begins: “**Most of the purported TIFFANY & CO. silver jewelry and packaging available on eBay is counterfeit.**” Pl.’s Ex. 290 (bold face type in original). It also says, *inter alia*:

The only way you can be certain that you are purchasing a genuine TIFFANY & CO. product is to purchase it from a Tiffany & Co. retail store, via our website (www.tiffany.com) or through a Tiffany & Co. catalogue. Tiffany & Co. stores do not authenticate merchandise. A good jeweler or appraiser may be able to do this for you.

*Id.*

In 2003 or early 2004, eBay began to use “special warning messages when a seller attempted to list a Tiffany item.” *Tiffany*, 576 F.Supp.2d at 491. These messages “instructed the seller to make sure that the item was authentic Tiffany merchandise and informed the seller that eBay ‘does not tolerate the listing of

## 5. Trademark Law

replica, counterfeit, or otherwise unauthorized items’ and that violation of this policy ‘could result in suspension of [the seller’s] account.’”*Id.* (alteration in original). The messages also provided a link to Tiffany’s “About Me” page with its “buyer beware” disclaimer. *Id.* If the seller “continued to list an item despite the warning, the listing was flagged for review.” *Id.*

In addition to cancelling particular suspicious transactions, eBay has also suspended from its website “hundreds of thousands of sellers every year,’ tens of thousands of whom were suspected [of] having engaged in infringing conduct.” *Id.* at 489. eBay primarily employed a “three strikes rule’ ” for suspensions, but would suspend sellers after the first violation if it was clear that “the seller ‘listed a number of infringing items,’ and ‘[selling counterfeit merchandise] appears to be the only thing they’ve come to eBay to do.’ ” *Id.* But if “a seller listed a potentially infringing item but appeared overall to be a legitimate seller, the ‘infringing items [were] taken down, and the seller [would] be sent a warning on the first offense and given the educational information, [and] told that . . . if they do this again, they will be suspended from eBay.’ ” *Id.* (alterations in original).

By late 2006, eBay had implemented additional anti-fraud measures: delaying the ability of buyers to view listings of certain brand names, including Tiffany’s, for 6 to 12 hours so as to give rights-holders such as Tiffany more time to review those listings; developing the ability to assess the number of items listed in a given listing; and restricting one-day and three-day auctions and cross-border trading for some brand-name items. *Id.* at 492.

The district court concluded that “eBay consistently took steps to improve its technology and develop anti-fraud measures as such measures became technologically feasible and reasonably available.” *Id.* at 493.

### *eBay’s Advertising*

At the same time that eBay was attempting to reduce the sale of counterfeit items on its website, it actively sought to promote sales of premium and branded jewelry, including Tiffany merchandise, on its site. *Id.* at 479-80. Among other things,

eBay “advised its sellers to take advantage of the demand for Tiffany merchandise as part of a broader effort to grow the Jewelry & Watches category.” *Id.* at 479. And prior to 2003, eBay advertised the availability of Tiffany merchandise on its site. eBay’s advertisements trumpeted “Mother’s Day Gifts!,” Pl.’s Exs. 392, 1064, a “Fall FASHION BRAND BLOWOUT,” Pl.’s Ex. 392, “Jewelry Best Sellers,” *id.*, “GREAT BRANDS, GREAT PRICES,” Pl.’s Ex. 1064, or “Top Valentine’s Deals,” Pl.’s Ex. 392, among other promotions. It encouraged the viewer to “GET THE FINER THINGS.” Pl.’s Ex. 392. These advertisements provided the reader with hyperlinks, at least one of each of which was related to Tiffany merchandise — “Tiffany,” “Tiffany & Co. under \$150,” “Tiffany & Co.,” “Tiffany Rings,” or “Tiffany & Co. under \$50.” Pl.’s Exs. 392, 1064.

eBay also purchased sponsored-link advertisements on various search engines to promote the availability of Tiffany items on its website. *Tiffany*, 576 F.Supp.2d at 480. In one such case, in the form of a printout of the results list from a search on Yahoo! for “tiffany,” the second sponsored link read “**Tiffany** on eBay. Find **tiffany** items at low prices. With over 5 million items for sale every day, you’ll find all

kinds of unique [unreadable] Marketplace. www.ebay.com.” Pl.’s Ex. 1065 (bold face type in original). Tiffany complained to eBay of the practice in 2003, and eBay told Tiffany that it had ceased buying sponsored links. *Tiffany*, 576 F.Supp.2d at 480. The district court found, however, that eBay continued to do so indirectly through a third party. *Id.*

... Tiffany appeals from the district court’s judgment for eBay.

## Discussion

...

### I. Direct Trademark Infringement

Tiffany alleges that eBay infringed its trademark in violation of section 32 of the Lanham Act. The district court described this as a claim of “direct trademark infringement,” *Tiffany*, 576 F.Supp.2d at 493, and we adopt that terminology. Under section 32, “the owner of a mark registered with the Patent and Trademark Office can bring a civil action against a person alleged to have used the mark without the owner’s consent.” *ITC Ltd. v. Punchgini, Inc.*, 482 F.3d 135, 145-46 (2d Cir.), *cert. denied*, 552 U.S. 827, 128 S.Ct. 288, 169 L.Ed.2d 38 (2007). We analyze such a claim “under a familiar two-prong test. The test looks first to whether the plaintiff’s mark is entitled to protection, and second to whether the defendant’s use of the mark is likely to cause consumers confusion as to the origin or sponsorship of the defendant’s goods.” *Savin Corp. v. Savin Group*, 391 F.3d 439, 456 (2d Cir.2004) (alterations incorporated and ellipses omitted), *cert. denied*, 546 U.S. 822, 126 S.Ct. 116, 163 L.Ed.2d 64 (2005).

In the district court, Tiffany argued that eBay had directly infringed its mark by using it on eBay’s website and by purchasing sponsored links containing the mark on Google and Yahoo! *Tiffany*, 576 F.Supp.2d at 494. Tiffany also argued that eBay and the sellers of the counterfeit goods using its site were jointly and severally liable. *Id.* The district court rejected these arguments on the ground that eBay’s use of Tiffany’s mark was protected by the doctrine of nominative fair use. *Id.* at 494-95.

...

We need not address the viability of the doctrine to resolve Tiffany’s claim, however. We have recognized that a defendant may lawfully use a plaintiff’s trademark where doing so is necessary to describe the plaintiff’s product and does not imply a false affiliation or endorsement by the plaintiff of the defendant. “While a trademark conveys an exclusive right to the use of a mark in commerce in the area reserved, that right generally does not prevent one who trades a branded product from accurately describing it by its brand name, so long as the trader does not create confusion by implying an affiliation with the owner of the product.” *Dow Jones & Co. v. Int’l Sec. Exch., Inc.*, 451 F.3d 295, 308 (2d Cir.2006); *see also Polymer Tech. Corp. v. Mimran*, 975 F.2d 58, 61-62 (2d Cir.1992) (“As a general rule, trademark law does

## 5. Trademark Law

not reach the sale of genuine goods bearing a true mark even though the sale is not authorized by the mark owner” (footnote omitted)); *cf. Prestonettes, Inc. v. Coty*, 264 U.S. 359, 368, 44 S.Ct. 350, 68 L.Ed. 731 (1924) (when a “mark is used in a way that does not deceive the public,” there is “no such sanctity in the word as to prevent its being used to tell the truth. It is not taboo.”).

We agree with the district court that eBay’s use of Tiffany’s mark on its website and in sponsored links was lawful. eBay used the mark to describe accurately the genuine Tiffany goods offered for sale on its website. And none of eBay’s uses of the mark suggested that Tiffany affiliated itself with eBay or endorsed the sale of its products through eBay’s website.

In addition, the “About Me” page that Tiffany has maintained on eBay’s website since 2004 states that “[m]ost of the purported ‘TIFFANY & CO.’ silver jewelry and packaging available on eBay is counterfeit.” *Tiffany*, 576 F.Supp.2d at 479 (internal quotation marks omitted). The page further explained that Tiffany itself sells its products only through its own stores, catalogues, and website. *Id.*

Tiffany argues, however, that even if eBay had the right to use its mark with respect to the resale of genuine Tiffany merchandise, eBay infringed the mark because it knew or had reason to know that there was “a substantial problem with the sale of counterfeit [Tiffany] silver jewelry” on the eBay website. Appellants’ Br. 45. As we discuss below, eBay’s knowledge *vel non* that counterfeit Tiffany wares were offered through its website is relevant to the issue of whether eBay contributed to the direct infringement of Tiffany’s mark by the counterfeiting vendors themselves, or whether eBay bears liability for false advertising. But it is not a basis for a claim of direct trademark infringement against eBay, especially inasmuch as it is undisputed that eBay promptly removed all listings that Tiffany challenged as counterfeit and took affirmative steps to identify and remove illegitimate Tiffany goods. To impose liability because eBay cannot guarantee the genuineness of all of the purported Tiffany products offered on its website would unduly inhibit the lawful resale of genuine Tiffany goods.

We conclude that eBay’s use of Tiffany’s mark in the described manner did not constitute direct trademark infringement.

## II. Contributory Trademark Infringement

The more difficult issue, and the one that the parties have properly focused our attention on, is whether eBay is liable for contributory trademark infringement—i.e., for culpably facilitating the infringing conduct of the counterfeiting vendors. Acknowledging the paucity of case law to guide us, we conclude that the district court correctly granted judgment on this issue in favor of eBay.

### A. Principles

Contributory trademark infringement is a judicially created doctrine that derives from the common law of torts. *See, e.g., Hard Rock Café Licensing Corp. v.*

## 5. Trademark Law

*Concession Servs., Inc.*, 955 F.2d 1143, 1148 (7th Cir.1992); cf. *Metro-Goldwyn-Mayer Studios Inc. v. Gorkster, Ltd.*, 545 U.S. 913, 930, 125 S.Ct. 2764, 162 L.Ed.2d 781 (2005) (“[T]hese doctrines of secondary liability emerged from common law principles and are well established in the law.”) (citations omitted). The Supreme Court most recently dealt with the subject in *Inwood Laboratories, Inc. v. Ives Laboratories, Inc.*, 456 U.S. 844, 102 S.Ct. 2182, 72 L.Ed.2d 606 (1982). There, the plaintiff, Ives, asserted that several drug manufacturers had induced pharmacists to mislabel a drug the defendants produced to pass it off as Ives’. See *id.* at 847-50, 102 S.Ct. 2182. According to the Court, “if a manufacturer or distributor intentionally induces another to infringe a trademark, or if it continues to supply its product to one whom it knows or has reason to know is engaging in trademark infringement, the manufacturer or distributor is contributorially responsible for any harm done as a result of the deceit.” *Id.* at 854, 102 S.Ct. 2182. The Court ultimately decided to remand the case to the Court of Appeals after concluding it had improperly rejected factual findings of the district court favoring the defendant manufacturers. *Id.* at 857-59, 102 S.Ct. 2182.

*Inwood*’s test for contributory trademark infringement applies on its face to manufacturers and distributors of goods. Courts have, however, extended the test to providers of services.

The Seventh Circuit applied *Inwood* to a lawsuit against the owner of a swap meet, or “flea market,” whose vendors were alleged to have sold infringing Hard Rock Café T-shirts. See *Hard Rock Café*, 955 F.2d at 1148-49. The court “treated trademark infringement as a species of tort,” *id.* at 1148, and analogized the swap meet owner to a landlord or licensor, on whom the common law “imposes the same duty . . . [as *Inwood*] impose[s] on manufacturers and distributors,” *id.* at 1149; see also *Fonovisa, Inc. v. Cherry Auction, Inc.*, 76 F.3d 259 (9th Cir.1996) (adopting *Hard Rock Café*’s reasoning and applying *Inwood* to a swap meet owner).

Speaking more generally, the Ninth Circuit concluded that *Inwood*’s test for contributory trademark infringement applies to a service provider if he or she exercises sufficient control over the infringing conduct. *Lockheed Martin Corp. v. Network Solutions, Inc.*, 194 F.3d 980, 984 (9th Cir.1999); see also *id.* (“Direct control and monitoring of the instrumentality used by a third party to infringe the plaintiff’s mark permits the expansion of *Inwood Lab.*’s ‘supplies a product’ requirement for contributory infringement.”).

We have apparently addressed contributory trademark infringement in only two related decisions, see *Polymer Tech. Corp. v. Mimran*, 975 F.2d 58, 64 (2d Cir.1992) (“*Polymer I* ”); *Polymer Tech. Corp. v. Mimran*, 37 F.3d 74, 81 (2d Cir.1994) (“*Polymer II* ”), and even then in little detail. Citing *Inwood*, we said that “[a] distributor who intentionally induces another to infringe a trademark, or continues to supply its product to one whom it knows or has reason to know is engaging in trademark infringement, is contributorially liable for any injury.” *Polymer I*, 975 F.2d at 64.

The limited case law leaves the law of contributory trademark infringement ill-defined. Although we are not the first court to consider the application of *Inwood* to the Internet, see, e.g., *Lockheed*, 194 F.3d 980, *supra* (Internet domain



## 5. Trademark Law

name registrar), we are apparently the first to consider its application to an online marketplace.

### B. Discussion

#### 1. Does *Inwood* Apply?

...

On appeal, eBay no longer maintains that it is not subject to *Inwood*. We therefore assume without deciding that *Inwood*'s test for contributory trademark infringement governs.

#### 2. Is eBay Liable Under *Inwood*?

The question that remains, then, is whether eBay is liable under the *Inwood* test on the basis of the services it provided to those who used its website to sell counterfeit Tiffany products. As noted, when applying *Inwood* to service providers, there are two ways in which a defendant may become contributorially [sic] liable for the infringing conduct of another: first, if the service provider "intentionally induces another to infringe a trademark," and second, if the service provider "continues to supply its [service] to one whom it knows or has reason to know is engaging in trademark infringement." *Inwood*, 456 U.S. at 854, 102 S.Ct. 2182. Tiffany does not argue that eBay induced the sale of counterfeit Tiffany goods on its website—the circumstances addressed by the first part of the *Inwood* test. It argues instead, under the second part of the *Inwood* test, that eBay continued to supply its services to the sellers of counterfeit Tiffany goods while knowing or having reason to know that such sellers were infringing Tiffany's mark.

The district court rejected this argument. First, it concluded that to the extent the NOCIs that Tiffany submitted gave eBay reason to know that particular listings were for counterfeit goods, eBay did not continue to carry those listings once it learned that they were specious. *Tiffany*, 576 F.Supp.2d at 515-16. The court found that eBay's practice was promptly to remove the challenged listing from its website, warn sellers and buyers, cancel fees it earned from that listing, and direct buyers not to consummate the sale of the disputed item. *Id.* at 516. The court therefore declined to hold eBay contributorially liable for the infringing conduct of those sellers. *Id.* at 518. On appeal, Tiffany does not appear to challenge this conclusion. In any event, we agree with the district court that no liability arises with respect to those terminated listings.

Tiffany disagrees vigorously, however, with the district court's further determination that eBay lacked sufficient knowledge of trademark infringement by sellers behind other, non-terminated listings to provide a basis for *Inwood* liability. Tiffany argued in the district court that eBay knew, or at least had reason to know, that counterfeit Tiffany goods were being sold ubiquitously on its website. *Id.* at 507-08. As evidence, it pointed to, *inter alia*, the demand letters it sent to eBay in 2003 and 2004, the results of its Buying Programs that it shared with eBay, the thousands of NOCIs it filed with eBay alleging its good faith belief that certain



listings were counterfeit, and the various complaints eBay received from buyers claiming that they had purchased one or more counterfeit Tiffany items through eBay's website. *Id.* at 507. Tiffany argued that taken together, this evidence established eBay's knowledge of the widespread sale of counterfeit Tiffany products on its website. Tiffany urged that eBay be held contributorially liable on the basis that despite that knowledge, it continued to make its services available to infringing sellers. *Id.* at 507-08.

The district court rejected this argument. It acknowledged that "[t]he evidence produced at trial demonstrated that eBay had *generalized* notice that some portion of the Tiffany goods sold on its website might be counterfeit." *Id.* at 507 (emphasis in original). The court characterized the issue before it as "whether eBay's *generalized* knowledge of trademark infringement on its website was sufficient to meet the 'knowledge or reason to know' prong of the *Inwood* test." *Id.* at 508 (emphasis in original). eBay had argued that "such generalized knowledge is insufficient, and that the law demands more specific knowledge of individual instances of infringement and infringing sellers before imposing a burden upon eBay to remedy the problem." *Id.*

The district court concluded that "while eBay clearly possessed general knowledge as to counterfeiting on its website, such generalized knowledge is insufficient under the *Inwood* test to impose upon eBay an affirmative duty to remedy the problem." *Id.* at 508. The court reasoned that *Inwood*'s language explicitly imposes contributory liability on a defendant who "continues to supply its product [—in eBay's case, its service—] to *one* whom it knows or has reason to know is engaging in trademark infringement." *Id.* at 508 (emphasis in original). The court also noted that plaintiffs "bear a high burden in establishing 'knowledge' of contributory infringement," and that courts have

been reluctant to extend contributory trademark liability to defendants where there is some uncertainty as to the extent or the nature of the infringement. In *Inwood*, Justice White emphasized in his concurring opinion that a defendant is not "require[d] . . . to refuse to sell to dealers who merely *might* pass off its goods."

*Id.* at 508-09 (quoting *Inwood*, 456 U.S. at 861, 102 S.Ct. 2182) (White, J., concurring) (emphasis and alteration in original).

Accordingly, the district court concluded that for Tiffany to establish eBay's contributory liability, Tiffany would have to show that eBay "knew or had reason to know of specific instances of actual infringement" beyond those that it addressed upon learning of them. *Id.* at 510. Tiffany failed to make such a showing.

On appeal, Tiffany argues that the distinction drawn by the district court between eBay's general knowledge of the sale of counterfeit Tiffany goods through its website, and its specific knowledge as to which particular sellers were making such sales, is a "false" one not required by the law. Appellants' Br. 28. Tiffany posits that the only relevant question is "whether all of the knowledge, when taken together, puts [eBay] on notice that there is a substantial problem of trademark infringement. If so and if it fails to act, [eBay] is liable for contributory trademark infringement." *Id.* at 29.

## 5. Trademark Law

We agree with the district court. For contributory trademark infringement liability to lie, a service provider must have more than a general knowledge or reason to know that its service is being used to sell counterfeit goods. Some contemporary knowledge of which particular listings are infringing or will infringe in the future is necessary.

We are not persuaded by Tiffany's proposed interpretation of *Inwood*. Tiffany understands the "lesson of *Inwood*" to be that an action for contributory trademark infringement lies where "the evidence [of infringing activity] — direct or circumstantial, taken as a whole — . . . provide[s] a basis for finding that the defendant knew or should have known that its product or service was being used to further illegal counterfeiting activity." Appellants' Br. 30. We think that Tiffany reads *Inwood* too broadly. Although the *Inwood* Court articulated a "knows or has reason to know" prong in setting out its contributory liability test, the Court explicitly declined to apply that prong to the facts then before it. *See Inwood*, 456 U.S. at 852 n. 12, 102 S.Ct. 2182 ("The District Court also found that the petitioners did not continue to provide drugs to retailers whom they knew or should have known were engaging in trademark infringement. The Court of Appeals did not discuss that finding, and we do not address it.") (internal citation omitted). The Court applied only the inducement prong of the test. *See id.* at 852-59, 102 S.Ct. 2182.

We therefore do not think that *Inwood* establishes the contours of the "knows or has reason to know" prong. Insofar as it speaks to the issue, though, the particular phrasing that the Court used that a defendant will be liable if it "continues to supply its product to *one* whom it knows or has reason to know is engaging in trademark infringement," *id.* at 854, 102 S.Ct. 2182 (emphasis added) — supports the district court's interpretation of *Inwood*, not Tiffany's.

We find helpful the Supreme Court's discussion of *Inwood* in a subsequent copyright case, *Sony Corp. of America v. Universal City Studios, Inc.*, 464 U.S. 417, 104 S.Ct. 774, 78 L.Ed.2d 574 (1984). There, defendant Sony manufactured and sold home video tape recorders. *Id.* at 419, 104 S.Ct. 774. Plaintiffs Universal Studios and Walt Disney Productions held copyrights on various television programs that individual television-viewers had taped using the defendant's recorders. *Id.* at 419-20, 104 S.Ct. 774. The plaintiffs contended that this use of the recorders constituted copyright infringement for which the defendants should be held contributorily liable. *Id.* In ruling for the defendants, the Court discussed *Inwood* and the differences between contributory liability in trademark versus copyright law.

If *Inwood's* narrow standard for contributory trademark infringement governed here, [the plaintiffs'] claim of contributory infringement would merit little discussion. Sony certainly does not 'intentionally induce[ ]' its customers to make infringing uses of [the plaintiffs'] copyrights, nor does it supply its products to *identified individuals known by it* to be engaging in continuing infringement of [the plaintiffs'] copyrights.

*Id.* at 439 n. 19, 104 S.Ct. 774 (quoting *Inwood*, 456 U.S. at 855, 102 S.Ct. 2182; emphases added).

Thus, the Court suggested, had the *Inwood* standard applied in *Sony*, the fact that Sony might have known that some portion of the purchasers of its product

used it to violate the copyrights of others would not have provided a sufficient basis for contributory liability. *Inwood*'s "narrow standard" would have required knowledge by Sony of "identified individuals" engaging in infringing conduct. Tiffany's reading of *Inwood* is therefore contrary to the interpretation of that case set forth in *Sony*.

Although the Supreme Court's observations in *Sony*, a copyright case, about the "knows or has reason to know" prong of the contributory trademark infringement test set forth in *Inwood* were dicta, they constitute the only discussion of that prong by the Supreme Court of which we are aware. We think them to be persuasive authority here.

Applying *Sony*'s interpretation of *Inwood*, we agree with the district court that "Tiffany's general allegations of counterfeiting failed to provide eBay with the knowledge required under *Inwood*." *Tiffany*, 576 F.Supp.2d at 511. Tiffany's demand letters and Buying Programs did not identify particular sellers who Tiffany thought were then offering or would offer counterfeit goods. *Id.* at 511-13. And although the NOCIs and buyer complaints gave eBay reason to know that certain sellers had been selling counterfeits, those sellers' listings were removed and repeat offenders were suspended from the eBay site. Thus Tiffany failed to demonstrate that eBay was supplying its service to individuals who it knew or had reason to know were selling counterfeit Tiffany goods.

Accordingly, we affirm the judgment of the district court insofar as it holds that eBay is not contributorially liable for trademark infringement.

### 3. Willful Blindness.

Tiffany and its amici express their concern that if eBay is not held liable except when specific counterfeit listings are brought to its attention, eBay will have no incentive to root out such listings from its website. They argue that this will effectively require Tiffany and similarly situated retailers to police eBay's website — and many others like it — "24 hours a day, and 365 days a year." Council of Fashion Designers of America, Inc. Amicus Br. 5. They urge that this is a burden that most mark holders cannot afford to bear.

First, and most obviously, we are interpreting the law and applying it to the facts of this case. We could not, even if we thought it wise, revise the existing law in order to better serve one party's interests at the expense of the other's.

But we are also disposed to think, and the record suggests, that private market forces give eBay and those operating similar businesses a strong incentive to minimize the counterfeit goods sold on their websites. eBay received many complaints from users claiming to have been duped into buying counterfeit Tiffany products sold on eBay. *Tiffany*, 576 F.Supp.2d at 487. The risk of alienating these users gives eBay a reason to identify and remove counterfeit listings. Indeed, it has spent millions of dollars in that effort.

Moreover, we agree with the district court that if eBay had reason to suspect that counterfeit Tiffany goods were being sold through its website, and intentionally shielded itself from discovering the offending listings or the identity of the sellers behind them, eBay might very well have been charged with knowledge of

## 5. Trademark Law

those sales sufficient to satisfy *Inwood*'s "knows or has reason to know" prong. *Tiffany*, 576 F.Supp.2d at 513-14. A service provider is not, we think, permitted willful blindness. When it has reason to suspect that users of its service are infringing a protected mark, it may not shield itself from learning of the particular infringing transactions by looking the other way. *See, e.g., Hard Rock Café*, 955 F.2d at 1149 ("To be willfully blind, a person must suspect wrongdoing and deliberately fail to investigate."); *Fonovisa*, 76 F.3d at 265 (applying *Hard Rock Café*'s reasoning to conclude that "a swap meet can not disregard its vendors' blatant trademark infringements with impunity").<sup>15</sup> In the words of the Seventh Circuit, "willful blindness is equivalent to actual knowledge for purposes of the Lanham Act." *Hard Rock Café*, 955 F.2d at 1149.

eBay appears to concede that it knew as a general matter that counterfeit Tiffany products were listed and sold through its website. *Tiffany*, 576 F. Supp.2d at 514. Without more, however, this knowledge is insufficient to trigger liability under *Inwood*. The district court found, after careful consideration, that eBay was not willfully blind to the counterfeit sales. *Id.* at 513. That finding is not clearly erroneous. eBay did not ignore the information it was given about counterfeit sales on its website.

### III. Trademark Dilution

...

The district court rejected Tiffany's dilution by blurring claim on the ground that "eBay never used the TIFFANY Marks in an effort to create an association with its own product, but instead, used the marks directly to advertise and identify the availability of authentic Tiffany merchandise on the eBay website." *Tiffany*, 576 F.Supp.2d at 524. The court concluded that "just as the dilution by blurring claim fails because eBay has never used the [Tiffany] Marks to refer to eBay's own product, the dilution by tarnishment claim also fails." *Id.* at 525. We agree. There is no second mark or product at issue here to blur with or to tarnish "Tiffany."

Tiffany argues that counterfeiting dilutes the value of its product. Perhaps. But insofar as eBay did not itself sell the goods at issue, it did not itself engage in dilution.

Tiffany argued unsuccessfully to the district court that eBay was liable for contributory dilution. *Id.* at 526. Assuming without deciding that such a cause of action exists, the court concluded that the claim would fail for the same reasons Tiffany's contributory trademark infringement claim failed. *Id.* Tiffany does not

---

15. To be clear, a service provider is not contributorially liable under *Inwood* merely for failing to anticipate that others would use its service to infringe a protected mark. *Inwood*, 456 U.S. at 854 n. 13, 102 S.Ct. 2182 (stating that for contributory liability to lie, a defendant must do more than "reasonably anticipate" a third party's infringing conduct (internal quotation marks omitted)). But contributory liability may arise where a defendant is (as was eBay here) made aware that there was infringement on its site but (unlike eBay here) ignored that fact.

## 5. Trademark Law

contest this conclusion on appeal. We therefore do not address it. *See Palmieri v. Allstate Ins. Co.*, 445 F.3d 179 (2d Cir.2006) (issues not raised on appeal are treated as waived).

## IV. False Advertising

Finally, Tiffany claims that eBay engaged in false advertising in violation of federal law. [The Second Circuit held that eBay's advertising of Tiffany products on its site was not literally false, but could be misleading if it suggested to a reasonable consumer that all those products were genuine. It remanded for a factual determination of that question].

## Conclusion

For the foregoing reasons, we affirm the judgment of the district court with respect to the claims of trademark infringement and dilution. Employing a *Jacobson* remand, we return the cause to the district court for further proceedings with respect to Tiffany's false advertising claim.