No. 08-964

In The
Supreme Court of the United States

BERNARD L. BILSKI AND RAND A. WARSAW,

Petitioners,

v.

DAVID J. KAPPOS, UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND DIRECTOR, PATENT AND TRADEMARK OFFICE,

Respondent.

On Writ Of Certiorari To The United States Court Of Appeals For The Federal Circuit

BRIEF *AMICI CURIAE* OF PROFESSORS PETER S. MENELL AND MICHAEL J. MEURER IN SUPPORT OF RESPONDENT

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INTEREST OF *AMICI CURIAE*[1]

The authors of this brief hold law degrees and doctorate degrees in economics. They are law professors who research and teach about intellectual property law and its economic effects. They file this brief solely as individuals and not on behalf of the institutions with which they are affiliated. Amici represent neither party in this action, and offer the following views on this matter.

SUMMARY OF ARGUMENT

The Intellectual Property Clause of the U.S. Constitution authorizes Congress "[t]o promote the Progress of . . . the useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their . . . Discoveries." At the time of ratification, "useful Arts" related to trades utilizing what we would today call "technology." Courts and the Patent Office long recognized this limitation, denying patent protection for business methods.

[1] Pursuant to Sup. Ct. R. 37.6, amici note that no counsel for a party authored this brief in whole or in part, and no counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than amici curiae made a monetary contribution to its preparation or submission. Petitioners and Respondents have consented to the filing of this brief through blanket consent letters filed with the Clerk's Office.

Beyond this constitutional limitation on the scope of patentable subject matter, Congress has not extended patent protection to business methods. The subject matter provision of the 1952 Patent Act merely codified existing subject matter categories and limitations, including the exclusion of business methods. The First Inventor Defense Act of 1999 did not amend § 101. It merely created a prior user defense. To read that provision to override more than two centuries of jurisprudence as well as § 101 without an express statement to that effect would be unwarranted and unwise.

Warnings that upholding the business method exclusion would hamper innovation have little if any bearing on the interpretation of the Constitution and the Patent Act in this case. Regardless, economic research indicates that restoring the business method exclusion could well promote progress, innovation, and competition.

ARGUMENT

I. The Intellectual Property Clause of the U.S. Constitution Precludes Congress from Authorizing Patent Protection for Business Methods and Other Subject Matters Outside of the "useful Arts"

As a threshold matter, this case implicates the scope of Congress's constitutional power to enact patent protection. This inquiry should be guided by

the text of the Intellectual Property Clause and the understanding of that text at the time of ratification. This section demonstrates that the Constitution limits patent monopolies to the "useful Arts," a term originally understood to exclude business methods.

Congress's authority to enact patent protection flows from the power "[t]o promote the Progress of . . . the useful Arts, by securing for limited Times to . . . Inventors the exclusive Right to their . . . Discoveries." *See Graham v. John Deere Co.*, 383 U.S. 1, 5 (1966) (quoting U.S. Const. art. I, § 8, cl. 8);[2] 1 Ernest Bainbridge Lipscomb III, *Walker on Patents* § 2:1, at 70-87 (3d ed. 1984) (discussing scholarship on interpretation of art. I, § 8, cl. 8). The original understanding of the Intellectual Property Clause demonstrates that protection for inventions was limited to the "*useful* Arts," while protection for writings could extend to all general knowledge or "Science." *See* Lipscomb, *supra* § 2:1, at 71-73 (describing Pickney's and Madison's likely roles in drafting the clause); The Federalist No. 43 (James Madison) ("The copyright of authors has been solemnly adjudged, in Great Britain, to be a right of common law. The right to *useful* inventions seems

[2] The omitted terms – "Science", "Authors", and "Writings" – confer power to enact copyright protection. *See* Richard C. De Wolf, *An Outline of Copyright Law* 15 (1925). During colonial times, the word "science" connoted knowledge in any field. Samuel Johnson, *Dictionary of the English Language* (7th ed. 1785).

with equal reason to belong to the inventors.") (emphasis added). The First Congress entitled the initial patent act, "An Act to promote the progress of *useful* Arts." Ch. 7, 1 Stat. 109, 110 (1790) (emphasis added). After the initial act, Congress passed fourteen successive patent acts with titles directed to promoting "useful arts," "useful discoveries," or "useful inventions." *See* Lipscomb, *supra* § 2.1, at 83-84. Only the Patent Act of 1837 referred to the promotion of "science," but that reference was corrected in the Patent Act of 1839. *Id.* at 84. Thus, Congress's patent power was originally understood as limited to "useful Arts."

Because the Intellectual Property Clause constrains Congress's authority to grant intellectual property rights,[3] Congress cannot grant patents extending beyond the "useful arts." *See Graham*, 383 U.S. at 5 (observing that the patent power is a "qualified authority . . . [which] is limited to the promotion of advances in the 'useful arts'"). To determine the contours of this constraint on Congressional patent power, the Court must consider the meaning of the phrase at the time of ratification.

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[3] *See Eldred v. Ashcroft*, 537 U.S. 186 (2003) (viewing the "limited Times" language as a constraint on congressional power, although not violated by the Copyright Term Extension Act); *Trade-Mark Cases*, 100 U.S. 82, 93-94 (1879) (holding that the clause precludes granting exclusive rights absent "invention," "discovery," or "originality").

Although the Framers provided no express definition of the term "useful Arts,"[4] usage at the time indicates that "useful Arts" related to trades utilizing what we would today call "technology." Just days before the Constitutional Convention of 1787, one delegate gave examples of the "useful arts":

> Under all the disadvantages which have attended manufactures and the useful arts, it must afford the most comfortable reflection to every patriotic mind to observe their progress in the United States and particularly in Pennsylvania. . . . Permit me however to mention them under their general heads: meal of all kinds, ships and boats, malt and distilled liquors, potash, gunpowder, cordage, loaf-sugar, pasteboard, cards and paper of every kind, books in various languages, snuff, tobacco, starch, cannon, musquets, anchors, nails, and very many other articles of iron, bricks, tiles, potters ware, millstones, and other stone work, cabinet work, trunks and Windsor chairs, carriages and harness of all kinds. . . .

Tench Coxe, *An Address to an Assembly of the Friends of American Manufactures*, 17-18 (Philadelphia, R. Aitkin & Son 1787). Alexander Hamilton praised the patent system as a way of encouraging "[inventions]

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[4] *See* Arthur H. Seidel, *The Constitution and a Standard of Patentability*, 48 J. Pat. Off. Soc'y 5, 10 (1966) (observing that "[n]o historical writings or events have been found analyzing the [Intellectual Property Clause])".

which relate to machinery" in the United States. *See* Alexander Hamilton, *The Reports of Alexander Hamilton: Report on Manufactures* (Dec. 5, 1791) 115-16, 175-76 (Jacob E. Cooke ed., Harper & Row 1964); *see also* The Federalist No. 8, at 69 (Alexander Hamilton) (Clinton Rossiter ed., 1961) (distinguishing between "the arts of industry, and the science of finance"). These sources support the textual inference that "useful Arts" concerned craft, trade, industrial, and technological activities.

Historians and patent scholars concur that the phrase "useful Arts", as used and understood circa 1787, related to *trades* utilizing what we would today call "technology."[5] The phrase "useful Arts" should be understood in contradistinction to the 18th century terms "polite," "liberal," and "fine" arts – which related to aesthetic and philosophical pursuits.[6] Just

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[5] *See* Seidel, *supra* note 4, at 10 (suggesting that "useful Arts" in 1787 connoted useful or helpful trades); Robert I. Coulter, *The Field of the Statutory Useful Arts*, 34 J. Pat. Off. Soc'y 487, 496 (1952) (noting that "[i]t seems clear that 'useful arts' (as a unitary technical term) embraced the so-called industrial, mechanical and manual arts of the 18th century"); Karl B. Lutz, *Patents and Science: A Clarification of the Patent Clause of the U.S. Constitution*, 32 J. Pat. Off. Soc'y 83, 86 (1950) (explaining that "'useful arts' meant what we now call 'technology,' or 'applied science'").

[6] *See* W. Kenrick, *An Address to the Artists and Manufacturers of Great Britain* 21-38 (1774) (contrasting "useful arts" with "polite arts"); John R. Thomas, *The Patenting of the Liberal Professions*, 40 B.C. L. Rev. 1139, 1156-57 (1999); Coulter, *supra*, at 494-96.

as Congress could not confer original jurisdiction on the Supreme Court for cases not specifically enumerated in Article III through statute, *Marbury v. Madison*, 5 U.S. 137, 175-76 (1803), here Congress may not authorize patents for "polite" or "liberal" arts.

Furthermore, the model for early U.S. patent law as well as the economic underpinnings of the American Revolution reinforce that the Founders conceived of patent protection as limited to technical advances and not commercial systems. The English Statute of Monopolies of 1623, which provided a model for the U.S. patent system,[7] provided an exception to the general prohibition against monopolies by granting a "privilege for the term of fourteen years or under [for] the sole working or making any manner of new manufactures . . . to the . . . inventor. . . ." Statute of Monopolies, 1623, 21 Jac. 1, c.3 (Eng.). Notably, that Statute eliminated commercial practices from the scope of patentable exclusivity:

> [T]hose who formulated the Constitution were familiar with the long struggle over monopolies so prominent in English history, where exclusive rights to engage even in ordinary business activities were granted so frequently by the Crown for the financial

[7] *See Pennock v. Dialogue*, 27 U.S. 1, 18 (1829) (observing that "many of the provisions of our patent act are derived from the principles and practice which have prevailed in the construction of that of England").

> benefits accruing to the Crown only. It was desired that in this country any Government grant of a monopoly for even a limited time should be limited to those things which serve in the promotion of science and the useful arts.

In re Yuan, 188 F.2d 377, 380 (CCPA 1951).[8]

The first two centuries of federal patent protection reinforce that "useful Arts" was understood to exclude business methods. The unpatentability of business methods was well-settled within the Patent Office by 1869. *See Ex parte Abraham*, 1869 C.D. 59 ("It is contrary to the spirit of the patent law construed by the Office for years, to grant patents for methods or analogous systems of bookkeeping.").[9] As discussed in Part II, *infra*, courts and commentators generally believed business methods to be outside the scope of patent protection throughout this period.

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[8] *See also Graham*, 383 U.S. at 5 (observing that the "useful arts" limitation on patentability in Article I, Section 8, Clause 8 "was written against the backdrop of the [English] practices – eventually curtailed by the Statute of Monopolies – of the Crown in granting monopolies to court favorites in goods or businesses which had long before been enjoyed by the public").

[9] *Cf.* Malla Pollack, *The Multiple Unconstitutionality of Business Method Patents*, 28 Rutgers Computer & Tech. L.J. 61, 96 (2002) ("The absence of business method patents cannot be explained by an absence of entrepreneurial creativity in Great Britain during the century before the American Revolution. On the contrary, 1720 is widely hailed as the beginning of a new era in English public finance and the beginning of major innovations in business organization." (citing historical sources)).

Applying plain meaning and the interpretive canon of *expressio unius est exclusio alterius* (the express mention of one thing excludes all others), the Constitutional phrase "useful Arts" most plausibly precludes Congress from granting patents to business methods, methods of practicing law, tax avoidance strategies, plot scripts, sports moves, and other non-technological subject matters. Such an interpretation would not exclude patentability of technology to implement business methods or other non-technological arts.

II. Neither the 1952 Patent Act Nor the First Inventor Defense Act of 1999 Extended the Scope of Patent Protection to Business Methods

If the U.S. Constitution empowers Congress to bring non-technological "discoveries" within the scope of patent protection, then this Court must interpret the scope of § 101 of the Patent Act. The historical record, statutory language, and legislative history relating to the 1952 Patent Act demonstrate that it did not encompass business methods.

A. The 1952 Patent Act Perpetuated Traditional Limitations on Patentable Subject Matter, Including the Exclusion of Business Methods

1. Historical Context of the 1952 Patent Act

The legislation that ultimately became the Patent Act of 1952 began as part of a general codification of the laws of the United States. *See* H.R. Rep. No. 82-1923, at 1 (1952) ("For many years there had been considerable agitation for a complete restatement and codification of all the laws of the United States, inasmuch as the only such codification – the Revised Statutes of 1874 – had become generally outmoded on all subjects."). The impetus for the Patent Act of 1952 was to bring together the numerous sections of the patent law – dating to the Revised Statutes of 1874 and subsequent enactments – into Title 35 of the United States Code. *Id.* at 5.

The codification task was assigned to the Committee on the Judiciary, which concurrently oversaw substantive revision of the patent law. *Id.* at 2. The Committee held hearings and called upon P.J. Federico, Examiner-in-Chief of the U.S. Patent Office, as well as other government officers, representatives of patent law associations, and members of the Bar.

The House Report characterized codification as the "principal purpose" of the bill. *Id.* at 5. But the bill also made several substantive changes to the patent law, principally out of concern that Supreme

Court decisions raised the threshold for inventiveness too high and applied the doctrine of patent misuse too liberally. The House Report noted two "major" substantive changes to the substantive patent law: "incorporating a requirement for invention in § 103 and the judicial doctrine of contributory infringement in § 271." *Id.*

2. The Origins and Meaning of Section 101 of the 1952 Patent Act

The nation's first patent law, "An Act to promote the progress of useful arts" (1790), defined the scope of patentable subject matter as "any useful art, manufacture, engine, machine, or device, or any improvement therein not before known or used." Ch. 7, § 1, 1 Stat. 109, 110 (1790). Congress replaced the 1790 Act three years later with another "act to promote the progress of useful arts."

The Patent Act of 1793 defined the scope of patentable subject matter as:

> any new and useful art, machine, manufacture or composition of matter and any new and useful improvement on any art, machine, manufacture or composition of matter.

Act of February 21, 1793, 1 Stat. 318. That language remained until the recodification of patent law in the 1952 Act. Congress preserved the language nearly verbatim. In the 1952 Act, Section 101 provides:

> any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof may obtain a patent therefore, subject to the conditions and requirements of this title.

Act July 19, 1952, c. 950, 66 Stat. 792, codified at 35 U.S.C. § 101. The only differences between the sections are the substitution of the word "process" for "art" and the avoidance of repeating the categories following the improvement clause through the use of the term "thereof." The legislative history makes clear that substituting "process" for "art" was not intended to be substantive in nature but rather to avoid confusion with other uses of the word "art":

> "Art" in this place in the [prior] statute has a different meaning than the words "useful arts" in the Constitution, and a different meaning than the use of the word "art" in other places in the statutes, and it is interpreted by the courts to be practically synonymous with process or method. The word "process" has been used to avoid the necessity of explanation that the word "art" as used in this place means "process or method," and that it does not mean the same thing as the word "art" in other places.

H.R. Rep. No. 82-1923, at 6.

To further clarify this substitution, Congress added the following definition:

> (b) the term "process" means process, art or method, and includes a new use of a known

> process, machine, manufacture, composition of matter, or material.

35 U.S.C. § 100. The legislative history reinforces that Congress did not intend to change the substantive scope of patentable subject matter:

> The definition of "process" has been added in section 100 to make it clear that "process or method" is meant, and also to clarify the present law as to the patentability of certain types of processes or methods as to which some insubstantial doubts have been expressed.

H.R. Rep. No. 82-1923, at 6. The latter clause – "certain types of processes or methods as to which some insubstantial doubts have been expressed" – was intended to clarify that dicta in *In re Thuau*, 135 F.2d 344, 347 (CCPA 1943) and some other decisions should not be read to bar patentability of a new use of a known machine, manufacture, or composition of matter. *See* P.J. Federico, *Commentary on the New Patent Act*, 35 U.S.C.A. (1954), reprinted in 75 J. Pat. & Trademark Off. Soc'y 161 (1993) [hereinafter "Federico Commentary"].

Thus, the language and legislative history show that Congress intended in the 1952 Act to clarify and recodify the existing contours of patentable subject matter. Congress did not intend to effectuate any change in the scope of patentable subject matter

(other than the caveat regarding new uses). *See Diamond v. Diehr*, 450 U.S. 175, 184 (1981) ("Analysis of the eligibility of a claim of patent protection for a 'process' did not change with the addition of that term to § 101."). Rather, it perpetuated the existing contours of patentable subject matter as expressed in the statute and recognized in patent jurisprudence. The substitution of "process" for "art" was for linguistic clarity – to avoid confusion with the constitutional phrase "useful Arts" and the concept of "prior art" – and not substantive reasons. This contrasts with the legislative language and intent with regard to §§ 103 and 271, which were substantive in nature. See Federico Commentary, *supra*, ("some modification was intended in the direction of moderating the extreme degrees of strictness exhibited by a number of judicial opinions over the past dozen or more years"). Thus, to interpret the scope of patentable subject matter under the 1952 Act, the Court must delve into the contemporary understanding of the terms in § 101 that would have been available to the members of the legislative body at the time of enactment.

3. As of 1952, Judicial Decisions Considered Business Methods to Be Beyond the Scope of Patentable Subject Matter

The most authoritative sources that Congress would have consulted at the time of enacting the 1952 Patent Act – treatises and judicial decisions – agreed

that business methods were outside the scope of patentable subject matter. As of 1952, the most authoritative patent treatise was Anthony William Deller's four volume treatise, entitled *Walker on Patents: Deller Edition*, published in 1937. The Deller edition updated Albert Henry Walker's classic patent treatise, first published in 1883.

Section 18 of the Deller Edition of *Walker on Patents*, entitled "Unpatentable Subjects" states:

> In view of the fact that patents are grants authorized by statute, only those classes of inventions which are specified by the patent statutes [] can be given patent protection. The statutes particularly specify "any new and useful art, machine, manufacture, or composition of matter, or any new and useful improvements thereof,". . . . It is erroneous to believe that every new idea or principle in and by itself is patentable. Thus, a so-called law of nature or scientific principle may not be the subject of a patent. *Within the classification of unpatentable subjects also fall*, the function, result or effect of a machine, an abstract idea, mental theories, plans of action, and so-called *"systems" of business*. These subjects will be discussed in more detail in the following sections.

William Anthony Deller, *Walker on Patents: Deller's Edition*, vol. 1, p. 62 (1937) [hereinafter *Deller's 1937 Edition*] (emphasis added). This makes clear several critical features of patentable subject matter in the years leading up to 1952: (1) only inventions falling

within the designated categories of "art, machine, manufacture, or composition of matter" could be patented; (2) "not every new idea or principle in and by itself is patentable"; and (3) courts recognized several categories of unpatentable subject matter – laws of nature or scientific principles; function, result or effect of a machine; abstract ideas; mental theories; plans of action; and systems of business.

Section 22 of the treatise, entitled "Systems of Business," states:

> As instances of non-patentability of ideas,[10] mention may be made of the various systems for doing business, each as modes of bookkeeping, and hotel checking systems. It has been held that a "system" or method of transaction business in neither as "art," nor does it come within any other designation of patentable subject-matter, as for example, a system of cash-registering and checking for hotels apart from the physical means of conducting the system. [*Munson v. Mayor, etc., of New York*, 124 U. S. 601, 31 L. Ed. 586 (1888); *United States Credit System Co. v. American Credit System Co.*, 51 Fed. 751, 754, C. C., N. D. Ill. (1892); *United States*

[10] [Section 22 references the prior section ("Abstract Ideas"), which states "[a]n idea itself, the mere existence of an intellectual notion that a thing could be done, and, if done, might be of practical utility, and mere mental theories or plans of action are not comprehended within the subject matter of patents."]

> *Credit System Co. v. American Credit Indemnity Co.*, 53 Fed. 818; *Hocke v. N. Y. Central & H. R. R. Co.*, 122 Fed. 467, 469, C. C. A. 2 (1903); cert. den. 191 U.S. 569, 48 L. Ed. 306; *Hotel Security Checking Co. v. Lorraine Co.*, 160 Fed. 467, 469, 479, and cases cited, C. C. A. 2 (1908); *Berardini v. Tocci*, 190 Fed. 329, 333 (1911); aff'd 200 Fed. 1021, C. C. A. 2 (1912); *Guthrie v. Curlett*, 10 F.(2d) 725, 726, C. C. A. 2 (1926).] As to whether or not the means of carrying out the system are patentable, there seems to be no objection in principle or authority. [*Rand McNally & Co. v. Exchange Scrip-Book Co.*, 187 Fed. 984, 986, C. C. A. 7 (1911); *Cincinnati Traction Co. v. Pope*, 210 Fed. 443, 446, C. C. A. 6 (1913).]

Deller's 1937 Edition, vol. 1, at 69.

The unpatentability of business methods was also well-settled within the Patent Office and courts as early as 1869. *See Ex parte Abraham*, 1869 C.D. 59. Court decisions from 1893 through the 1952 Act repeatedly declare that methods of doing business were not patentable subject matter. The current author of *Walker on Patents* observes that "[u]ntil recently it had been considered *well established* that [business] methods were non-statutory." *Moy's Walker on Patents* § 5:28 (4th ed. 2008) (emphasis added). Moy further reports that:

> Virtually all the prior reference works that mention business methods note that they were not patentable subject matter. See, e.g.,

> Leon H. Amdur, Patent Law and Practice 24-25 (1935); Anthony William Deller, 1 Walker on Patents 152-53 (1938 ed.); Robert L. Harmon, Patents and the Federal Circuit 41 (3rd ed. 1994). Until only recently the USPTO's own Manual of Patenting Examination Procedure also asserted that business methods were unpatentable.

Moy's Walker on Patents § 5:28 n.2 (4th ed. 2008) (citation omitted).

The long-standing interpretive canon presuming that codification statutes do not alter prior law applies directly here. Because business methods were outside of the scope of patentable subject matter prior to the 1952 Act and Congress intended to perpetuate existing contours of patentable subject matter when it passed the 1952 Act, the inescapable conclusion is that the 1952 Act excluded business methods from the scope of patentable subject matter. This Court stated in *Finley v. United States*, 490 U.S. 545 (1989), *superceded by statute*, Judicial Improvements Act of 1990, Pub. L. No. 101-650, 104 Stat. 5089, that, "[u]nder established canons of statutory construction, 'it will not be inferred that Congress, in revising and consolidating the laws, intended to change their effect unless such intention is *clearly expressed*.'" *Id.* at 554 (quoting *Anderson v. Pacific Coast S.S. Co.*, 225 U.S. 187, 199 (1912) (holding that linguistic changes in the 1948 revision of the Judicial Code did not expand the substantive scope of jurisdiction) (emphasis added)). Congress did not clearly express its intent to change

the scope of patentable subject matter – in fact, it clearly expressed the opposite – so this Court should find no change in the scope of patentable subject matter of § 101. *Cf. Astoria Fed. Sav. & Loan Ass'n v. Solimino*, 501 U.S. 104, 108 (1991) ("[W]here a common-law principle is well established . . . the courts may take it as given that Congress has legislated with an expectation that the principle will apply except when a statutory purpose to the contrary is evident.") (citations and internal quotation marks omitted); *Isbrandtsen Co. v. Johnson*, 343 U.S. 779, 783 (1952) ("Statutes which invade the common law . . . are to be read with a presumption favoring the retention of long-established and familiar principles, except when a statutory purpose to the contrary is evident.").

B. The Phrase "Anything Under the Sun Made by Man" from the 1952 Act's Legislative History Does Not Indicate Legislative Intent to Expand the Scope of Patentable Subject Matter

Some of the confusion surrounding the patentability of business methods stems from a snippet ("anything under the sun made by man") from the legislative history of the 1952 Act. That phrase first surfaced in *Application of Bergy*, 596 F.2d 952, 961 (CCPA 1979). It was then picked up in *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980) and *Diamond v. Diehr*, 450 U.S. 175, 182 (1981) without its full context or even ellipses. It was then mischaracterized

in *State Street Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1368 (Fed. Cir. 1998), *cert. denied*, 525 U.S. 1093 (1999), to suggest that Congress intended to cover business method patents in the 1952 Act. Analysis of this snippet in context shows that it does not and cannot mean what the *State Street* court concluded.

The snippet in question arises in the section of the House Report describing "Part II" of Title 35, which "relates to patentability of inventions and the grant of patents." H.R. Rep. No. 82-1923, at 6. This discussion begins with four paragraphs explaining § 101: the first two deal with the subject matter categories; the second two focus on the final clause of § 101.

The first and longest paragraph begins by stating that § 101 "specifies the type of material that can be the subject matter of a patent." This clearly implies that there are types of material that are not within the scope of patentable subject matter. The report then explains that the 1952 Act covers the same subject matter categories as prior law, with the semantic change of "art" to "process." *See id*.

The second paragraph explains that the definition of "process" was added in § 100 "to make it clear that 'process or method' is meant, and also to clarify the present law as to the patentability of certain types of processes or methods as to which some insubstantial doubts have been expressed." *See id*. This clearly refers to the overruling of dicta in

In re Thuau, 135 F.2d 344 (CCPA 1943). *See* Part II(A)(2), *supra*.

The third paragraph states in its entirety:

> Section 101 sets forth the subject matter that can be patented, "subject to the conditions and requirements of this title." The conditions under which a patent may be obtained follow, and section 102 covers the conditions relating to novelty.

H.R. Rep. No. 82-1923, at 6. At this point in the discussion, the report has moved past the subject matter categories of § 101 to the final clause – it is a transition to the additional (non-subject matter) requirements for patentability.

The fourth and final paragraph, which includes the snippet in question, then states in its entirety:

> A person may have "invented" a machine or a manufacture, which may include anything under the sun that is made by man, but it is not necessarily patentable under section 101 unless the conditions of the title are fulfilled.

H.R. Rep. No. 82-1923, at 6. Given the order of paragraphs as well as the transition, this sentence augments and reinforces the preceding paragraph – which is focused on the final clause of § 101: noting that the test of patentability includes novelty and other requirements. Furthermore, the prefatory clause clearly limits the dependent clause ("which may include anything under the sun that is made by

man") to the statutory classes of "machine" or "manufacture." These categories plainly fall within the ambit of "useful Arts." Note that the prefatory clause does not include the other statutory categories: "process" and "composition of matter." Nor does this sentence call for maximal subject matter. Rather, it emphasizes the importance of meeting additional requirements for patentability.

Thus, read in context, the "anything under the sun" snippet does not stand for the proposition that Congress intended the broadest possible scope of patentable subject matter. Furthermore, it cannot properly be the basis for finding that Congress intended to override long-standing limitations on the scope of patentable subject matter – such as the exclusion of business method patents – reflected in jurisprudence and practice. *See Finley,* 490 U.S. at 554; *cf. Solimino*, 501 U.S. at 108; *Isbrandtsen*, 343 U.S. at 783.

C. The First Inventor Defense Act of 1999 Did Not Expand the Scope of Patentable Subject Matter

Several briefs contend that the First Inventor Defense Act of 1999, Pub. L. No. 106-113, app. A, 113 Stat. 1501, 552, 555, codified at 35 U.S.C. § 273, indicates congressional intent to afford patent protection for business methods. These arguments overlook the statutory text, legislative history, and circumstances leading to the establishment of the

§ 273 prior user right, which demonstrate that Congress's intent was far less ambitious.

First and foremost, the text of the statute demonstrates that Congress did not expand the scope of patentable subject matter. The 1999 legislation does not amend § 101, which governs the scope of patentable subject matter. Arguments that the 1999 Amendment overturned the established definition of "process," in essence, require that the amendment repealed the limited scope of § 101 of the 1952 Act by implication. Such interpretations violate the "cardinal rule that repeals by implication are not favored." *Morton v. Mancari*, 417 U.S. 535, 549 (1974); *see also Branch v. Smith*, 538 U.S. 254, 273 (2003); *Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 468 (2001) (Congress "does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions – it does not, one might say, hide elephants in mouseholes."); *Posadas v. National City Bank*, 296 U.S. 497, 503 (1936). If the adoption of § 273 dramatically expanded the scope of § 101, it did so without Congress expressly acknowledging that effect, and thus would require this Court to endorse an implied repeal of the settled interpretation of § 101 of the 1952 Patent Act.

Instead, Congress placed § 273 in Part III of Title 35, which addresses enforcement rights. That choice is significant because when Congress originally compiled and codified patent law in the 1952 Patent Act it established a three-part structure intended to guide future developments: "[t]he organization of the

bill and the arrangement of the sections are such that new future amendments can readily find their place in the organization."[11] H.R. Rep. No. 82-1923, at 5 (1952). Congress described the differences between sections in detail to aid this organization: "The second part consists of the sections relating to the conditions under which a patent may be obtained. . . . The third part contains the sections relating to the patents themselves and the protections of rights under patents." *Id.* The placement of the First Inventor Defense Act of 1999 in Part III instead of Part II indicates Congress's intent *not* to change the law governing "the conditions under which a patent may be obtained." *Id.* This Court has warned against adopting statutory interpretations that are inconsistent with the structure of the overall statutory scheme. *See Beck v. PACE Int'l Union*, 551 U.S. 96, 108 (2007). Interpreting § 273 as a revision to "the conditions under which a patent may be obtained," H.R. Rep. No. 82-1923, at 5, directly contradicts Congress's established statutory structure of Title 35.

That § 273 is a stand-alone provision, intended simply to provide a limited defense in the event that business methods were *deemed* patentable, is further demonstrated by the text of § 273. In defining the term "method" for purposes of the prior user defense,

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[11] Title 35 now also includes a Part IV entitled "Patent Cooperation Treaty" relating to the harmonization of U.S. patent law with international treaty obligations. *See* 35 U.S.C. §§ 351-76.

Congress avoided altering the definitions governing patentable subject matter in § 100. *See* 35 U.S.C. § 100(a) (providing definitions of terms "[w]hen used in this title"). Instead, Congress included a definition of "method" in § 273(a), "[f]or purposes of *this* section," which deals only with the limited defense. *Id*. (emphasis added). Had Congress intended to endorse the *State Street* definition of "method," it could easily have applied that definition to the entire title, including § 101.

The legislative history also does not support the contention that Congress intended to amend § 100 or § 101 by the backdoor method of adopting a stand-alone defense in Part III. Any fair reading of the legislative history reveals ambiguity, but nothing amounts to an express endorsement of *State Street*. At best, the legislative history acknowledges that a court interpreted § 101 in a particular way, H.R. Rep. No. 82-1923 at 47 (observing that "[t]he *State Street* court came down on the side of a very broad scope of subject matter that qualifies for protection"), and as a result, enactment of a defense is necessary given that business methods until then were not considered patentable. *Id.* at 46 (observing that *State Street* provided protection "for subject matter that previously had been thought to be unpatentable."). Had Congress understood *State Street* as the correct interpretation of what Congress intended in the 1952 Act, it easily could have said that. The better interpretation of the opaque discussion is that Congress was fixing an urgent problem created by a surprising

decision. The speed with which Congress enacted the fix – the final bill and report were completed in fewer than seven months and the bill was enacted in fewer than eleven months from the denial of certiorari to the Act – further supports that Congress addressed a potentially serious problem without taking on the bigger issue. And while Congress could have overruled *State Street*, that would have required much more extensive reports, hearings, and stakeholder involvement. The § 273 defense was a path of low, if not least, resistance.

The circumstances surrounding the enactment of a prior user right shows that Congress sought to avoid adverse consequences of the Federal Circuit's interpretation of patentable subject matter in *State Street*, *supra*, not to expand the scope of patentable subject matter or ratify the *State Street* decision. The *State Street* decision boldly swept away more than a century of jurisprudence holding that business methods were unpatentable and ignored the language and legislative history of the 1952 Act.[12] The decision

[12] Judge Giles Rich based his broad reading of Section 101 of the 1952 Patent Act in *State Street* on two fundamental misapprehensions: (1) that the use of the word "any" takes precedence over the designation of specific subject matter categories; and (2) that Congress's use of the phrase "anything under the sun that is made by man" in the legislative history could be taken out of its proper context to eviscerate established jurisprudential limitations on patentable subject matter. According to the *State Street* decision, the only limitation on the scope of patentable subject matter is that an invention produce a "useful, concrete, and tangible result." See *State Street*, 149 F.3d

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sent ominous shock waves through the business and financial communities. *See, e.g.*, William T. Ellis & Aaron Chatterjee, "State Street" Sets Seismic Precedent, Nat'l L.J., Sept. 21, 1998, at B13; "Boom" in Business Method Patent Filings Has Followed State Street Ruling, PTO Says, Pat. Trademark & Copr. J. (BNA) 115 (Dec. 10, 1998); Josh McHugh, *Barbed Wire on the Internet*, Forbes, May 17, 1999, at 183 (suggesting that e-commerce magnates may "try to turn patents into the barbed wire of the Internet");

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at 1375 (quoting *In re Alappat*, 33 F.3d 1526, 1544 (Fed. Cir. 1994)). Interestingly, Judge Rich took the opposite view three decades earlier, when his recollection of the 1952 Act would undoubtedly have been fresher:

> Section 101, entitled 'Inventions patentable,' enumerated the categories of inventions subject to patenting. Of course, not every kind of an invention can be patented. Invaluable though it may be to individuals, the public, and national defense, the invention of a more effective organization of the materials in, and the techniques of teaching a course in physics, chemistry, or Russian is not patentable because it is outside of the enumerated categories of 'process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.' Also outside that group is one of the greatest inventions of our times, the diaper service.

Giles S. Rich, *The Principles of Patentability*, 28 George Washington Univ. L. Rev. 393, 393-94 (1960). Under the test articulated in the *State Street Bank* decision – does the invention produce a "useful, concrete, and tangible result" – it is difficult to see how the first diaper service would not pass muster. Yet, Judge Rich considered it outside of the scope of § 101 in 1960. Congress made no changes to the scope of patentable subject matter in the intervening years.

Jaret Seidberg, *Ruling Threatens Banks With Patent Lawsuits*, Am. Banker, Sept. 2, 1998, at 3 (asserting that the *State Street* decision "threatens to embroil the financial services industry in hundreds of patent infringement lawsuits," creating possible liability exceeding $2 billion); Robert M. Kunstadt, *Opening Pandora's Box*, IP Mag., Jan. 1999 (warning that "a firestorm of litigation threatens to engulf corporate America" and predicting "large-scale disruption of U.S. commerce, as sharp operators move to patent business methods and assert patents against the unsuspecting").

In this atmosphere of harsh criticism of the *State Street* decision and dire predictions about its impacts on the financial sector, Congress's decision to create a safe harbor is most plausibly interpreted as side-stepping the question of patentable subject matter. Congress sought to insulate businesses that were using methods as trade secrets from the *State Street* decision, leaving the scope of § 101 intact. Furthermore, for opponents of business method patents, enacting a business method patent exclusion into law was not necessary in light of the text of § 101 (which limits subject matter to designated categories), Supreme Court jurisprudence, and the legislative history surrounding the 1952 Act. On the other side, some patent holders and members of the patent bar were resistant to Congress tinkering with the core subject matter provision.

By placing the First Inventor Defense Act of 1999 in Part III of Title 35, Congress avoided the

patentability debate and confined its amendment to the enforceability of patent rights. For the reasons set forth in Parts I and II(A), *supra*, the 1999 Amendment was passed in response to the judicial error in *State Street*. This Court should not "place on the shoulders of Congress the burden of the Court's own error." *Girouard v. United States*, 328 U.S. 61, 69-70 (1946) (holding that the passage of the Second War Powers Act of 1942 did not constitute Congressional acquiescence to previous decisions incorrectly construing the War Powers Act of 1940). To read that provision to override more than two centuries of jurisprudence as well as § 101 without an express statement to that effect would be unwarranted and unwise.

III. Economic Research Cautions Against Extending Patent Protection to Business Methods

Several briefs suggest, without substantiation, that a categorical exclusion of business method patents or some limits on the patentability of computer software would greatly impair innovation and economic activity.[13] The relevance of this argument to

[13] *See, e.g.*, Brief *Amici Curiae* of 20 Law and Business Professors, 18 ("Expanding these categorical denials of patentability beyond this well-established core of exceptions would work a harm of unpredictable magnitude on the incentives to innovate in the United States."); Brief for the Business Software Association as *Amicus Curiae*, 7 ("Simple economics suggests that, if patent protection for software were

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constitutional or statutory interpretation in this case is attenuated at best. Nonetheless, we believe that it is important to provide the Court with a more balanced account of the economic effects of extending patent protection to business methods.

Economic research has shown that the relationship between patent protection and innovation is complex and often diverges from the naive and romantic incentive story being asserted in several briefs supporting the patentability of non-technological arts. *See generally* Peter S. Menell & Suzanne Scotchmer, *Intellectual Property Law*, in *Handbook of Law and Economics* 1479-1524 *(*A. Mitchell Polinsky and Steven Shavell, eds. 2007). Patent-based incentives are crucial for promoting invention in industries, such as pharmaceuticals, where prospective inventors face high expected research costs and rapid imitation. *See* Joseph A. DiMasi, Ronald W. Hansen & Henry G. Grabowski, *The Price of Innovation: New Estimates of Drug Development Costs,* 22 J. Health Econ. 151 (2003) (estimating that the average cost to develop a new drug, including the costs of research projects that were abandoned, is $402 million). Absent patents (and regulatory hurdles), generic drug companies could quickly imitate a successful new drug at a small fraction of this development cost.

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curtailed, the adverse consequences would be swift and severe. . . . software development would suffer.").

But the pharmaceutical industry is not typical. First, few other industries have such a high regulatory burden on initial innovation. Second, imitation is more difficult in most industries. Edwin Mansfield, Mark Schwartz & Samuel Wagner, *Imitation Costs and Patents: An Empirical Study,* 91 Econ. J. 907 (1981), using survey data, find that imitation cost and imitation time are about two-thirds of the original development cost and time on average. Third, pharmaceutical inventions tend to be discrete and pharmaceutical patents tend to feature clear boundaries that make enforcement effective. *See* James Bessen & Michael J. Meurer, *Patent Failure: How Judges, Bureaucrats, and Lawyers Put Innovators at Risk* 107, 153 (2008). The social value of patents tends to be lower in fields, including business method innovations, characterized by cumulative innovation and fuzzy patent boundaries. *See* Federal Trade Commission, *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy* (2003).

Economic evidence indicates that the social costs of business method patents are significant and the social benefits are small compared to those costs.

A. The Social Costs of Business Methods Are Significant

Patent grants entail significant social costs – including impeding follow-on research and competition – and hence the net impact on innovation can be

complex and ambiguous. When inventors work on different but complementary research lines, they each can benefit from unconstrained access to the inventions of others. "[W]hen innovation is sequential and complementary, standard conclusions about patents and imitation may get turned on their heads. Imitation becomes a spur to innovation, whereas strong patents become an impediment." James Bessen & Eric S. Maskin, *Sequential Innovation, Patents, and Imitation,* 40 RAND J. Econ. 611, 613 (2009).

The effects of patents on cumulative innovation depend critically on the transaction costs relating to licensing. *See* Menell and Scotchmer, *supra*, at 1499-1506. Such costs can be particularly high in areas – such as business method patents – where claim scope is vague due to notice problems and attendant litigation uncertainty. *See* Bessen & Meurer, *supra*, at 46-72. Innovators have difficulty clearing rights before making investments or taking steps to avoid infringement. This results in enormous cost from opportunistic lawsuits. Furthermore, patent examiners and courts have difficulty evaluating patents with fuzzy boundaries.

Empirical evidence reveals both negative and positive effects of patents on the pace of cumulative innovation. A high concentration of software patents in a particular market discourages entry, especially when patent rights are ambiguous and transaction costs are likely to be high. *See* Iain M. Cockburn & Megan MacGarvie, *Entry, Exit and Patenting in the*

Software Industry, NBER Working Paper No. 12563 (2006). This deterrent effect is strongest for small, new firms. *Id.* Furthermore, a high concentration of patents delays venture capital funding for new software firms. Iain M. Cockburn & Megan MacGarvie, *Patents, Thickets and the Financing of Early-Stage Firms: Evidence from the Software Industry*, 18 J. Econ. & Manag. Strategy 729 (2009). On the positive side, an entrant's own patents may facilitate financing and entry into markets subject to a high concentration of others' patents. *Id.*

Consider a business method patent recently asserted against Google, AOL, Microsoft, Yahoo! and others. *Performance Pricing, Inc. v. Google, Inc.*, Civil Action No. 2-07cv432, 2009 WL 2497102 (E.D. Tex., August 13, 2009). The patent covers a method of "conducting business transactions over the Internet, allowing buyers to reduce the price of the selected product/service based on the buyer's performance during a collateral activity." *Id.* at *1. The number and size of the defendants in this lawsuit illustrates the broad potential reach and potential liability exposure of such patents. It appears that the patent has failed as property in one of two ways. Either major Internet firms brazenly pirated patented technology from a small inventor, or they independently created technology and were not able to avoid subsequent patent litigation.

The patent asserted in *Performance Pricing* contains broad and vague language that might be read to cover Internet ad auctions or other activities

by the defendants. Even though the patent discloses nothing about Internet ad auctions, the defendants still must be wary. Microsoft, Yahoo! and others have settled with the patent owner. *See* Samuel Howard, *Microsoft Exits Dispute Over Online Ad Patent*, Law360, June 2, 2009, http://www.law360.com/articles/109339. Given the potentially devastating stakes, high cost of discovery and mounting a defense, business disruption of litigation, adverse publicity from being sued, and uncertainty over the outcome, many defendants license patents or settle lawsuits even when they stand a good chance of prevailing. *See* Michael J. Meurer, *Controlling Opportunistic and Anti-Competitive Intellectual Property Litigation,* 44 B. C. L. Rev. 509 (2003); Joseph Farrell & Carl Shapiro, *How Strong are Weak Patents?*, 98 Amer. Econ. Rev. 1347 (2008). These costs discourage and distort innovation.

There is little that businesses can do to insure against this risk. Firms in the information, communications, and finance industries find that rights clearance is usually impractical because patent boundaries are too hard to decipher and the number of potentially relevant patents is too great. *See* Bessen & Meurer, *supra*, at 70 ("According to David M. Martin, CEO of a patent risk-management firm, 'if you're selling online, at the most recent count there are 4,319 patents you could be violating. If you also planned to advertise, receive payments for or plan shipments of your goods, you would need to be concerned with approximately 11,000.'"); Mark A.

Lemley, *Ignoring Patents,* 2008 Mich. St. L. Rev. 19, 21.[14] Behavior is radically different in industries where patent boundaries are relatively clear, enabling patents to function like tangible forms of property. Pharmaceutical firms read patents and work hard to license necessary patent rights before investing in drug development. *See* Benjamin N. Roin, *Unpatentable Drugs and the Standards of Patentability,* 87 Texas L. Rev. 503, 545-47 (2009).

Evidence from patent litigation further illustrates the high costs of business method patents. Such patents are about seven times more likely to be asserted in a lawsuit than the average patent. *See* Bessen & Meurer, *supra* at 153. They are also about seven times more likely to have their claim construction appealed to the Federal Circuit. *Id*. The rate of litigation for finance-related patents is twenty seven to thirty nine times greater than the average patent. *See* Josh Lerner, *The Litigation of Financial Patents*, Harv. Bus. School Working Paper 09-027, 2 (2008).

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[14] Copying by the defendant in patent cases is relatively rare: less than four percent of the cases tried to judgment (and probably less that two percent of the relevant cases). *See* Bessen & Meurer, *supra,* at 126; Christopher A. Cotropia & Mark A. Lemley, *Copying in Patent Law,* 87 N.C. L. Rev. 1421 (2009). In the overwhelming majority of business method enforcement actions, the defendants implemented the allegedly infringing business methods without knowledge of the patent owner's "invention" or the patent.

B. The Social Benefits of Business Methods Are Small Compared to the Social Costs

Economic research casts doubt on whether the social benefits of business method patents outweigh the social costs. In theory, such patents promote innovation by attracting capital for the creation of new business methods and encouraging disclosure of methods that would otherwise be kept secret. "There is at present very little evidence to argue that business method patents have had a significant effect on the R&D investments of financial institutions." Robert M. Hunt, *Business Method Patents and U.S. Financial Services*, Working Paper No. 08-10, Philadelphia Federal Reserve Bank, 27, January 2009. Business and financial methods are more likely to fall into the class of inventions for which the costs of patenting outweigh the benefits due to the impediments to cumulative innovation and the drag of prosecution costs, due diligence, and litigation. *See* Bronwyn Hall, *Business and Financial Method Patents, Innovation, and Policy*, NBER Working Paper No. 14868, 18 (2009).

Business method innovation will continue in the absence of patent protection because there are many other means for appropriating rewards from this type of innovation. Staying ahead of competitors is the most basic and most important incentive. *See generally* Phillipe Aghion, et al., *Competition and Innovation: An Inverted-U Relationship,* 120 Q. J. Econ. 701 (2005); Bessen & Maskin, *supra*. "Panelists [at

hearings held by the FTC] consistently stated that competition drives innovation in [software and internet] industries." *See* Federal Trade Commission, *supra* at Ch. 3, p. 44. In addition to lead-time, the sale of complementary goods and services, reputation, tax incentives, research contracts, government grants, trademark protection, and copyright protection play significant roles in supporting innovation. *Cf.* Richard C. Levin et al., *Appropriating the Returns from Industrial R&D*, 3 Brookings Papers on Econ. Activity 783 (1987); Wesley M. Cohen, Richard R. Nelson & John P. Walsh, *Protecting Their Intellectual Assets: Appropriability Conditions and Why U.S. Manufacturing Firms Patent (Or Not),* NBER Working Paper No. 7552 (2000).

Although these surveys do not address business method innovation directly, their results for software are relevant because many business method patents have software implementations. *See* Hunt, *supra* at 1. A recent survey of small, new firms confirms the results in the early surveys which focused mostly on larger firms. "In software, patenting is rated the least important among all the appropriability strategies." *See* Stuart J.H. Graham, et al., *High Technology Entrepreneurs and the Patent System: Results of the 2008 Berkeley Patent Survey,* 28, August 25, 2009, http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1429049. Empirical studies indicate that software patents have not stimulated software research. Even though the number of software patents has grown dramatically, there is no associated evidence of

growth in software research and development. *See* James Bessen & Robert M. Hunt, *An Empirical Look at Software Patents,* 16 J. Econ. & Manag. Strategy 157 (2007).

Some commentators argue that business method patents induce firms to disclose inventions that would otherwise be kept secret. There is little evidence that this putative benefit is significant (or even exists). Survey evidence suggests that few innovators read patents for their disclosures because the quality of the disclosure is low. *See* Bessen & Meurer, *supra,* at 233. Regardless of disclosure quality, the incentive to patent is undercut by the failure of most countries to permit patents on business methods. There is a strong incentive to maintain secrecy because American patents are of limited value in global financial markets.

In summary, to paraphrase Mark Twain, warnings of "harm of unpredictable magnitude on the incentives to innovate" and "swift and severe" "adverse consequences" from the exclusion of business method patents have been greatly exaggerated. To the contrary, economic research indicates that restoring this well-established limitation on the scope of patentable subject matter could well promote progress, innovation, and competition. Although we doubt that these considerations bear significantly if at all on the interpretive questions before the Court, they should certainly not be weighed on the side of extending patent protection to business methods.

CONCLUSION

The Intellectual Property Clause of the Constitution bars Congress from extending patent protection to non-technological fields, including business methods. Even if constitutional authority exists, Congress perpetuated the well-established business method exclusion in the 1952 Patent Act and the First Inventor Defense Act of 1999 should not be read to override § 101.

The courts and the Patent Office successfully navigated the line between technological and non-technological fields for over two centuries. Patent systems throughout the world continue to do so. Re-establishing technological advance as the touchstone for patent protection in the United States will help to restore confidence in, the efficacy of, and the logic of this vital institution.

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