

No. 08-964

IN THE
Supreme Court of the United States

BERNARD L. BILSKI and RAND A. WARSAW,

Petitioners,

v.

JOHN DOLL, Acting Under Secretary of Commerce
for Intellectual Property and Acting Director,
Patent and Trademark Office,

Respondent.

**ON WRIT OF CERTIORARI TO THE
UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT**

**BRIEF OF REGULATORY DATACORP, INC,
AMERICAN EXPRESS COMPANY, PALM INC.,
ROCKWELL AUTOMATION, INC., AND
SAP AMERICA, INC. AS AMICI CURIAE
IN SUPPORT OF NEITHER PARTY**

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INTEREST OF AMICI CURIAE

The Amici Curiae¹ are technology companies that provide innovative products and services to other companies and consumers. While the Amici come from diverse industry segments, all devote considerable resources to innovation. The Amici believe that a properly functioning patent system encourages greater investments in innovation and thereby advances the progress of the useful arts.

Collectively, Amici own numerous patents and are also, at times, defendants in patent infringement actions. Amici seek a balanced patent system in which patents are generally available on useful products and processes but are limited to true inventions that meet requirements set forth in the statute. Amici believe that balance can best be achieved by faithfully adhering the statutory directions and eschewing uncertain and shifting glosses that unduly narrow or expand patent protection.

Amicus Regulatory DataCorp, Inc. (RDC) provides the world's largest database of open-source, risk-relevant records and data services that assist financial and other firms in satisfying their due diligence requirements to detect and thwart money laundering, corruption, terrorist financing, and other abusive

1. No counsel for a party authored this brief in whole or in part, and no such counsel or party made a monetary contribution intended to fund the preparation or submission of this brief. No person other than *amici curiae*, their members, or their counsel made a monetary contribution to its preparation or submission.

activities. The Court of Appeals for the Federal Circuit permitted RDC to present amicus arguments during the oral argument below.

Amicus American Express Company is a leading global travel and financial services company.

Amicus Palm Inc. provides mobile technology to enable people to better manage their lives on the go.

Amicus Rockwell Automation, Inc. provides control, power, information and software solutions that help solve manufacturing problems and enable real-time information exchange.

Amicus SAP America, Inc. is a leading technology company focused on developing innovative software and computer-based business solutions. The Amicus conducts significant research and development and invests heavily in commercializing innovative technologies.

SUMMARY OF ARGUMENT

This is a straightforward case of statutory interpretation to be resolved using the ordinary meaning of the language Congress placed in sections 101 and 100(b) of the Patent Act. As this Court has observed, that language is not merely broad but “extremely broad,” and its breadth demonstrates that “Congress plainly contemplated that the patent laws would be given wide scope.” *J.E.M Ag Supply v. Pioneer Hi-Bred Int’l*, 534 U.S. 124, 130 (2001) (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980)). The

government is now asking this Court to impose a formalistic restriction on definition of “process” that would create an unprecedented and uncertain judicial limitation on patentable subject matter. This Court should reject that invitation just as it did more than a third of a century ago, when the government unsuccessfully advanced the very same argument. *See Gottschalk v. Benson*, 409 U.S. 63, 71 (1972).

Accepting the government’s argument would require rejection of core principles of statutory interpretation for the government’s position finds no basis in the text or history of the statute. The statutory language chosen by Congress started out extremely broad, and in ensuing re-enactments Congress has taken action that not only underscores the breadth of the provision, but also in one important respect overturns prior judicial precedents imposing a narrowing construction on the language.

The government’s position here—even if it were viewed as a proposal for common-law making without regard to the limitations of statutory interpretation—would remain unattractive. The proposed rule lacks even a rudimentary degree of certainty, is difficult or impossible to reconcile with previously issued patents and prior holdings of this Court, and is only one of many competing proposals for limiting the statutory language. Moreover, the machine-or-transformation test is unnecessary because other conventional patent law doctrines, which are well grounded in the statute, are fully capable of addressing any legitimate concerns about patents that are vague, abstract, obvious, or otherwise not useful.

The statutory language here is so clear that this case can be usefully compared to the controversial case of *Church of the Holy Trinity v. United States*, 143 U.S. 457 (1892). Adoption of the government’s position would require this Court to go beyond—indeed, well beyond—*Church of the Holy Trinity* in endorsing an atextual approach to statutory interpretation.

I. The Original Meaning and History of the Statutory Text Forecloses the Uncertain and Unprecedented Gloss Imposed Below.

The exact statutory language in §§ 101 and 100(b) can be traced back more than two centuries to the earliest Patent Acts. This historical background confirms not only that Congress has consistently chosen broad language to accomplish its goals but that, to remove any potential ambiguities, Congress has repeatedly *expanded* the scope of the language. The Federal Circuit’s acceptance of the government’s narrowing construction violates multiple rules of statutory construction, including the “elementary” rule

that the meaning of a statute must, in the first instance, be sought in the language in which the act is framed, and if that is plain, and if the law is within the constitutional authority of the law-making body which passed it, the sole function of the courts is to enforce it according to its terms.

Caminetti v. United States, 242 U.S. 470, 485 (1917).

1. The 1790 Patent Act.

The first U.S. Patent Act in 1790 defined as patentable subject matter “any useful art, manufacture, engine, machine, or device, or any improvement therein.” Act of April 10, 1790, 1 Stat. 109, 110. The first two categories—“useful art” and “manufacture”—remain in the modern statute, and their plain meanings and history provide the best indications of congressional intent.

“[M]anufacture” was already an important word in Anglo-American patent law, for the British Statute of Monopolies from 1623 used that word—and that word only—to describe patentable subject matter under English law. *See* Statute of Monopolies, 21 Jac. 1, c. 3 § 6 (allowing patents on “any manner of new Manufactures within this Realme”). “Manufacture” itself could cover the field of patentable subject matter because, at the time, the noun referred *both* to the process of making *and* to the things made. This dual meaning of “manufacture” was clear in, for example, the Johnson Dictionary, which lists two definitions of “manufacture” in its noun form:

1. The practice of making any piece of workmanship.
2. Any thing made by art.

2 Samuel Johnson, *A Dictionary of the English Language* n90 (6th ed. 1785) (pagination from electronic

version at http://www.archive.org/stream/dictionary_ofengl02johnuoft#page/n90/mode/1up).²

Because of the broad definition of “manufacture,” the English patent system routinely issued process patents. Indeed, Chief Justice Eyre estimated in 1795 that “two-thirds, I believe I might say, three-fourths of all patents granted since the statute [of Monopolies] passed, are for methods of operating and of manufacturing, producing no new substances and employing no new machinery.” *Boulton v. Bull*, Carp. Pat. Rep. 117, 149 (Ct. Com. Pl. 1795) (Eyre, C.J.).

The meaning of “manufacture” was long a well known part of patent practice on both sides of the Atlantic. Thus, Thomas Webster—one of most prominent early English patent commentators—instructed that “any change in the series of processes pursued will constitute a new manufacture” within the meaning of the Statute of Monopolies. See Thomas Webster, *On the Subject-Matter of Letters Patent for Inventions* 9 (1841). Similarly, this Court in *Merrill v. Yeomans*, 94 U.S. 568, 570-71 & 572 (1876), held that “manufacture” in a patent could be “used with equal propriety to express the process of making an article,

2. The appropriate set of dictionaries to use are those written at approximately the time when the language became law, even if the language has been later re-codified or re-enacted without material change. See *St. Francis College v. Al-Khazraji*, 481 U.S. 604, 610-12 (1987) (interpreting 42 U.S.C. § 1981 using dictionaries published “when § 1981 became law in the 19th century”).

or the article so made,” and that, in that case, it was actually “used in the sense of the word ‘process.’”³

Moreover, not only could “manufacture” cover both processes and products, but its contemporaneous meaning allowed it to do so broadly. Thus, the Johnson dictionary includes immensely broad definitions of words used to define each of the meanings of “manufacture.” Thus, “workmanship” was defined to include:

1. Manufacture; something made by any one.
2. The skill of a worker;
3. The art of working.

² *Johnson Dictionary* at n1081 (usage examples omitted) (<http://www.archive.org/stream/dictionaryofengl02johnuoft#page/n1081/mode/1up>). So too, “art” was defined in sweeping terms to mean:

1. The power of doing something not taught by nature and instinct
2. A science; as, the liberal *arts*.
3. A trade.

¹ *Id.* at n182 (available at <http://www.archive.org/stream/dictionaryofengl01johnuoft#page/n182/mode/1up>).

3. The dual meaning of “manufacture” remains in modern usage, though the process of making is one of the secondary meanings. See, e.g., *Webster’s Third New International Dictionary* 1378 (1963).

Despite the dual, sweeping and comprehensive meanings attached to the word “manufacture” in both contemporaneous language and patent practice, the first Congress was unwilling to let the definition of patentable subject matter rest solely on one word. Instead, it began this country’s definition of patentable subject with the phrase “any useful art”—the phrase that defines the limits of congressional power under the Patent Clause of Article I, sec. 8, cl. 8 of the Constitution. Given the already broad meaning of “manufacture,” the addition of the constitutional language provides a fairly clear indication that Congress was not, to put it mildly, searching about for narrow words that would exclude new and useful innovations from the scope of the patent system.

The first Congress’s decision to combine “manufacture” with “any useful art” also refutes the argument, relied on by the Government below, that the word “process” in the modern statute (which, pursuant to § 100(b), still encompasses any “art”) should be given a narrowing construction by interpreting it “*in pari materia* with the other three categories of inventions” in the modern statute. PTO Supp. Br. 9 (filed Mar. 6, 2008). There are two problems with the Government’s argument. First, the *in pari materia* canon applies in interpreting two different *statutes*—the canon holds that “statutes addressing the same subject matter generally should be read as if they were one law.” *Wachovia Bank v. Schmidt*, 546 U. S. 303, 315-16 (2006) (internal quotations omitted). It is simply not at issue here whether the list of patentable subject matter categories in § 101 should be read as if they were part of one law.

Second, rather than *in pari materia*, the appropriate canon to apply here is the “cardinal principle . . . that a statute ought, upon the whole, to be so construed that, if it can be prevented, no clause, sentence, or word shall be superfluous, void, or insignificant.” *TRW Inc. v. Andrews*, 534 U.S. 19, 31 (2001) (internal quotations omitted). If the statutory words “art” and “process” are limited to any process that “is tied to a particular machine” or “transforms a particular article into a different state or thing,” Pet. App. 12a, Congress’s inclusion of the word “art” in 1790 (and later “process”) would have been superfluous because the broad contemporaneous meaning of “manufacture” already covered at least that much. Under a correct interpretation, however, the addition of “any useful art” did have meaning because, to the extent any ambiguity remained in “manufacture,” the addition phrase clarified the breadth of the language and of Congress’s intention.

Finally, the government below also argued that the phrase “useful art” (as it exists in the Constitution and as copied into the early Patent Act) should be interpreted narrowly because “usages of the term ‘useful arts’ contemporaneous with the framing of the Constitution uniformly tie ‘useful arts’ to manufactures and manufacturing processes, thereby providing strong support for the notion that ‘process’ must be interpreted in parity with the other statutory categories.” PTO Supp. Br. at 10-11. The government is wrong on the history.

It is of course true that manufactures of all types were considered “useful arts,” and thus individuals

interested in encouraging domestic manufacturing—such as the early industrial advocate and assistant Secretary of Commerce Tench Coxe—could quite correctly describe “progress in the useful arts as having produced improvements in numerous kinds of manufactures, from ships to whips to watches.” *Id.* at 11 n.4 (paraphrasing Tench Coxe, *An Address to an Assembly of the Friends of American Manufactures, in Calling for More Domestic Manufacturing* 18 (1787)). It is a logical error to assume that, because all manufacturing arts are useful arts, all useful arts must be manufacturing arts.

None of the historical sources produced by the government below constrain the useful arts *solely* to the processes or arts of manufacturing (narrowly construed), and certainly none limits “useful arts” to those arts that are “tied to a particular machine” or that “transform[] a particular article into a different state or thing.” Quite the contrary. For example, in another work, Tench Coxe himself listed the “[m]any curious and valuable inventions and improvements” responsible for the “very rapid progress, and a much wider diffusion in the useful arts and trades” occurring in the young nation. Tench Coxe, *A Statement of the Arts and Manufactures of the United States* 1 (1814). Coxe included improvements in the management techniques and services used by manufacturers and other producers such as “the division of labor in the cultivation of the cane,” “the extension and facilitation of communication,” and “the extension of the funds of the manufacturers by many of the banks, which are solidly founded and rigidly constituted and administered.” *Id.* Coxe listed these management and service

improvements indiscriminately with such improvements as “the machine for splitting skins” and “the conversion of fossil coal into a pigment.” *Id.*

Coxe considered all of those improvements to fall under the category “Instruments and Agents of Manufactures” (*id.* at xlix), and this points to another flaw in the government’s argument. Even if the word “manufacture” in the statute were to be given a very narrow interpretation to include only the production of goods from *raw materials*—a meaning that excludes mining, agriculture, shipping, communications and the service industries⁴—still the concept of “useful arts” was used in a much broader sense to include *at least* all the arts that were useful in supporting and fostering manufacturing. Modern society’s greater specializations of function and divisions of labor should not obscure the

4. This more narrow meaning does not appear in the 1785 Johnson Dictionary and it was clearly not the meaning imparted by English judges interpreting the Statute of Monopolies. Yet it is clear that Coxe was imparting a very narrow meaning to “manufactures” because he was encouraging the United States to produce finished goods such as “candles, hats, boots, . . . and various other manufactures,” and discouraging concentration on the production of “raw productions,” such as “copper, crude sugar” or “other articles of unmanufactured produce.” Coxe, *supra*, at xxi. That more narrow meaning of “manufacture” may have been emerging as a connotation, and by the twentieth century it had become one denotation of the word. See Webster’s New International Dictionary, Second Edition, 1499 (1948) (giving as the third definition of manufacture “[a]nything made *from raw materials* by the hand, by machinery, or by art, . . .”) (emphasis added). Still, the breadth of the word’s traditional meaning—“the making of anything by any agency or process,” *id.* (fourth definition)—endures.

truth that was evident to Tench Coxe two centuries ago: Even an industry fitting the narrowest meaning of manufacturing, like the modern automobile industry, is dependent upon good communications, information processing, management techniques, banking practices and the service industries generally.

Finally, as even the government's sources demonstrate, the field of "useful arts" was traditionally defined not by the distinction between manufacturing and non-manufacturing, but by the distinction between the "polite" and "useful" arts. PTO Supp. Br. at 11 n.4 (citing W. Kenrick, *An Address to the Artists and Manufacturers of Great Britain* (1774)). That traditional distinction was typically explained as being between arts "designed to please" and arts that "aim to supply human wants." Samuel P. Newman, *A Practical System of Rhetoric* 53 (1827). As one early American writer phrased it:

What are the useful arts? They are those arts or occupations, which are carried on, with a view to *profit* in contradistinction to such as are pu[r]sued for *pleasure*, which are often called *liberal* or *polite* arts.

Robert James Turnbull, *The Crisis or Essays on the Usurpations of the Federal Government* 55 (1827). See also David Spadafora, *The Idea of Progress in Eighteenth-Century Britain* 33 (1990) (concluding that "the polite arts were considered to have pleasure for their goal"). Historical sources quite clearly classified early information-generating arts such as navigation solidly within the useful arts, even though those fields

could also be accurately described as falling within the liberal arts. *See id.* Moreover, the distinction between polite and useful arts is not difficult to apply in fields relevant to this case: Communications, business, finance, management and information processing are designed to satisfy real world human wants; they are not part of the polite arts.

2. The 1793 Patent Act.

In 1793, Congress modified the definition of patentable subject matter to be “any new and useful art, machine, manufacture or composition of matter, or any new and useful improvement [thereof].” 1 Stat. 318, 319. Congress thus (i) retained, without change, the broadest words and phrases in the list—“useful art” and “manufacture”; (ii) removed from the list the two of the more narrow words in the list “engine” and “device”; and (iii) added the phrase “composition of matter.”

Given the breadth of “useful art” and “manufacture,” the wording changes in 1793 do not indicate any change in substantive policy, but the importance of these changes can be understood in light the implications for the canons of statutory construction *ejusdem generis* and *noscitur a sociis*.

Under the *ejusdem generis* canon, broad words following a list of more specific items may be limited to cover only things similar to the more specific. Both the 1790 and 1793 Acts listed the broadest and most general category (“useful art”) *first* so the statutes were not classical cases for *ejusdem generis*. Nevertheless, Congress’s action in 1793—repeal of two more narrow

words and addition of a new broad term⁵—tends to confirm that Congress did not inadvertently include broader language while trying to limit the scope to a more specific category.

Similarly, the canon *noscitur a sociis* generally holds that statutory words may be interpreted in light of associated word elsewhere in the statute. This canon does not mean that “pairing a broad statutory term with a narrow one shrinks the broad one” for “giving one example does not convert express inclusion into restrictive equation.” *S. D. Warren Co. v. Maine Bd. of Environmental Protection*, 547 U. S. 370, 379 (2006). Moreover, “*noscitur a sociis* is no help absent some sort of gathering with a common feature to extrapolate.” *Id.* at 379-80. Here again, Congress’s revision of the statute in 1793 pushed the statutory language away from the narrow and toward the more general so that the most prominent common feature is the breadth of the four categories, coupled with the associated word “any.”

3. The 1952 Act.

Congress made three changes to statutory subject matter in 1952:

First, Congress substituted the word “process” for “art” in § 101. Congress, however, retained the word

5. “Composition of matter” is broader than “engine” or “device” because devices and engines would literally fit within the new category, but some compositions of matter—e.g., a bacterium (see, *Diamond v. Chakrabarty*, *supra*), or a new element (see *In re Seaborg*, 328 F.2d 996 (CCPA 1964)—would probably not be considered an “engine” or a “device.”

“art” as part of the express statutory definition of “process” given in § 100(b). Thus, as this Court noted in *Diamond v. Diehr*, 450 U.S. 175, 184 (1981), “[a]nalysis of the eligibility of a claim of patent protection for a ‘process’ did not change with the addition of that term to § 101.” A “process” had previously been “considered a form of ‘art’ as that term was used in the 1793 Act,” *id.* at 182, and any such type of “art” remained patentable under the express definition of § 100(b).

Second, Congress also added an express definition of “process,” which included the words “process” and “method” in addition to the word “art.” The meaning of process at the time was:

1. Act of proceeding; . . . procedure;
2. A course of procedure; something that occurs in a series of actions or events.

Webster’s Second, *supra* note 4, at 1972. And “method” meant:

1. An orderly procedure or process, as, orig., of treating disease; regular way or manner of doing anything; hence, a set form of procedure adopted in investigation or instruction; as, a *method* of improving the mind.

Id. at 1548. In short, Congress expressly considered what definition should be given to the new statutory term “process” and used words with ordinary meanings that were consistently broad. If Congress wanted the judiciary to impose a limiting gloss on “process,” it gave remarkably little guidance as to the possible content of that gloss.

Third, Congress overturned prior judicial decisions holding that discoveries of new uses for old machines or processes were not patentable subject matter. *See, e.g., Roberts v. Ryer*, 91 U.S. 150, 157 (1875) (“It is no new invention to use an old machine for a new purpose.”). The intuition behind that doctrine dated back at least to Thomas Jefferson, who believed “that a machine of which we were possessed, might be applied by every man to *any use of which it is susceptible*, and that this right ought not to be taken from him and given to a monopolist, because the first perhaps had occasion so to apply it.”⁶ The doctrine had been applied by this Court with varying degrees of stringency,⁷ and it had caused much uncertainty. In § 100(b), Congress abolished it by providing that “a new use of a known process, machine, manufacture, composition of matter, or material” must be considered a potentially patentable “process” within the meaning of the Patent Act.

The express inclusion of “new uses” within the definition of patentable subject matter is important

6. Letter from Thomas Jefferson to Isaac McPherson (August 13, 1813) (*available at <http://etext.virginia.edu/etcbin/toccer-new2?id=JefLett.sgm&images=images/modeng&data=/texts/english/modeng/parsed&tag=public&part=218&division=div1>*) (emphasis added).

7. For the varying application of the doctrine, compare *Roberts v. Ryer*, *supra*, with *Washing-Machine Co. v. Tool Co.*, 87 U.S. 342, 351 (1874) (holding that, at least in circumstances where there was not “any novel and useful result,” a “new application” was an unpatentable “case of double use”); and *Busell Trimmer Co. v. Stevens*, 137 U.S. 423, 434 (1890) (holding that a new use *was patentable* at least where the newly discovered use was “an entirely new use”).

because it provides a clear textual basis for an important class of modern inventions. Even 18th and 19th century machines were sometimes (in the words of Jefferson) “susceptible” to different uses, and an inventive “new use” conveyed to the world nothing more than new instructions concerning how to use the existing physical machine. That circumstance has become ubiquitous in an era where modern general-purpose computers are designed to be “susceptible” to many new uses. A new computer program—e.g., a program that manages complex financial transactions or detects financial risks—provides a new way of using an existing machine and thus fits comfortably within the express definition of “process” included in the statute by Congress.

The text of § 100(b) therefore provides an explicit basis for an important point on which we agree with the government’s position in this case: A “machine-based process”—including new uses of existing machines—generally falls within patentable subject matter as defined by Congress. PTO Supp. Br. at 26. We also agree with the government that, under the statute as drafted by Congress, “there is no such thing as a categorical business method exception to the patent system” and that technological innovations should not “go unprotected simply because they operate in a commercial environment.” *Id.* at 32.

Because Congress clearly expressed its intent through the “extremely broad” statutory language of the 1790, 1793 and 1952 statutes, *J.E.M. Ag Supply*, 534 U.S. at 130, resort to the legislative history is unnecessary. However, if the legislative history were to be consulted, it would reveal that Congress was fully

aware that the language was expansive. Indeed, both House and Senate committees specifically indicated their sweeping understanding of the word “manufacture, which may include anything under the sun that is made by man.” H.R.Rep. No.1923, 82d Cong., 2d Sess., 6 (1952); S. Rep. No.1979, 82d Cong., 2d Sess., 5 (1952); *see also Chakrabarty*, 450 U.S. at 182 (quoting these reports). These reports are a good indication that Congress was fully aware that the traditional meaning of “manufacture” in patent law could cover either a product or process (as this Court held in *Merrill v. Yeomans*, *supra*), and that Congress intended such a literal interpretation of the language.

In sum, Congress has repeatedly selected words with broad ordinary meanings in defining patentable subject matter; has added additional broad words to reinforce the pre-existing words in the statute; has eliminated some narrower words previously in the statute (though words such as “engine” and “device” can be considered narrow only in comparison to the more sweeping words in the statute); and has even overruled part of the narrowing judicial gloss that was once put on the statute.

II. The Federal Circuit, the Government and the Government’s Amici Present No Consistent and Coherent Rule for Limiting the Reach of § 101.

The language of § 101 is not vague or uncertain; it is just broad, which is what Congress intended. Even if this Court were predisposed to adding a judicial gloss to that language in common-law fashion (*see* Guido Calabresi, *A Common Law for the Age of Statutes*

(1982)), the glosses being proposed in this case are strikingly unattractive. One immediate problem is that the court below, the government and the various amici have been unable to agree on a single theory to justify and to govern the judicial gloss that is to be imposed on the statute. That lack of agreement provides a good indication whether a clear path will appear once the text of the statute is abandoned. There are other problems too. We focus here on the problems associated with merely two of the potential candidates to be the judicial gloss on the statute.

1. The Machine-or-Transformation Test.

Even if it were considered purely from the standpoint of common-law making, the specific test endorsed by the Federal Circuit—that any patentable process must be either tied to a particular machine or transform a particular article into a different state or thing—has numerous problems.

First, more than a third of a century ago, the government advocated the precise restriction it is advocating again here in this case. *See* Reply Br. for Petitioner at 7-8, in *Gottschalk v. Benson*, 409 U.S. 63 (1972) (No. 71-485). The government relied on the same dicta being cited in this litigation, *id.* at 7 (citing *Cochrane v. Deener*, 94 U.S. 780, 788 (1876)), and argued that patentable processes either (i) had to involve “physical substances on which physical acts are performed,” or (ii) had to include “machinery or apparatus limitations” for the processes involving “the manipulation and transmission of intangible entities—such as electrical energy for telecommunications . . .

or information or data processing.” *Id.* at 8. The *Benson* Court declined to limit patentable subject matter with that sort of formalistic rule.

Second, after the dicta in *Cochrane v. Deener* was written, this Court defined process in *Tilghman v. Proctor*, 102 U.S. 707, 728 (1880), to be “an act, or a mode of acting”—“a conception of the mind, seen only by its effects when being executed or performed.” If Congress were looking to Supreme Court dicta for a comprehensive definition of “process,” there is no reason to think that it looked to the earlier *Cochrane* “definition” rather than the later *Tilghman* “definition.” Indeed, this Court’s later opinion in *Expanded Metal Co. v. Bradford*, 214 U.S. 366 (1909), quoted both *Cochrane* and *Tilghman*, emphasized the breadth of patentable processes, and praised the *Tilghman* formulation as a “clear and succinct statement of the rule” governing process. *Id.* at 384.

Third, even at the time of *Benson*, the “machine-or-transformation” test could not account for all the cases decided by this Court. In *O’Reilly v. Morse*, 56 U.S. 62 (1853), Samuel Morse’s fifth claim specifically covered Morse Code, i.e., Morse’s “system of signs, consisting of dots and spaces, and of dots, spaces, and horizontal lines, for numerals, letters, words, or sentences, substantially as herein set forth and illustrated, for telegraphic purposes.” *Id.* at 86. The examiner from the Patent Office construed the claim to mean:

The patent of said Morse also secures to him the right to use a system of alphabetical signs, consisting of dots and spaces, and dots,

spaces, and horizontal lines. Upon careful investigation it did not appear that these signs had ever before been used as an alphabet of language, and the patent was accordingly granted.

S.Ct. Record in *O'Reilly v. Morse*, at 128. The breadth of Morse's fifth claim is made clear by a comparison with his sixth claim, which was limited to uses of the code "in combination with machinery for recording" the coded signals. Yet even though the accused infringer argued that such a code could not be "the subject of a patent," *id.* at 35, *see also* 56 U.S. at 101 (noting arguments by counsel on the patentability of claim 5), the Court sustained the claim, stating that it "perceive[s] no well-founded objection . . . to [Morse's] right to a patent for the first seven inventions set forth in the specification of his claims." *Id.* at 112.⁸

Morse's patent claim on his code was similar to any number of traditional patents issued on coding and notational methods that plainly fail the government's

8. In discussing claim 3 of Morse's basic patent and his second patent on an improvement, the Court noted that the accused infringer could not escape infringement because Morse's "patent is not for the invention of a new alphabet; but for a combination of powers composed of tangible and intangible elements, described in his specification, by means of which marks or signs may be impressed upon paper at a distance, which can there be read and understood." 56 U.S. at 124. The Court, however, also passed upon the validity of all the claims in the Morse patent—including claim 5—because, at the time, the whole of the patent could be void if the inventor claimed more than he was entitled to. *See id.* at 121.

new machine-or-transformation test. *See, e.g.*, U.S. Pat. Nos. 831,061 (1906) (cipher coding system), 429,841 (1890) (musical notation), 198,507 (1877) (phonetic notation method). Those patents also show why patentable methods need not be limited by the machine-or-transformation test. While the government in its briefing below did not articulate any policy rationale for its proposed judicial gloss, the government's briefs in *Benson* at least attempted to do so. The government argued that, without machine-or-transformation limitations, "the scope of the claimed monopoly cannot be determined by the Patent Office or subsequent competitors." Reply Br. in *Benson* at 8. Yet claims such as Morse code provide very clear definitions of the patent's scope, and competitors could easily avoid the patented method if they so desired.

Finally, a new, judicially created exclusion from patentable subject matter should not be imposed without some consideration of the problems that will arise in administering it. In briefing below, the government acknowledged that it would "not always be simple to draw the line between a statutory process *appropriately* 'tied to a particular apparatus' and a nonstatutory method with nominal recitations of structure." PTO Supp. Br. at 14 (emphasis added). This passage acknowledges that the actual test to be applied will not be a bright line rule but will instead require a standardless assessment of "appropriateness."

Enforcement of a machine-or-transformation test presents a real dilemma for the PTO. If the test is treated formalistically, then it will be easy to evade because sophisticated patent drafters can always or almost always include the necessary limitations in their claims.

Chakrabarty provides a good example of the problem with formalisms in this doctrinal area: In trying to enforce its rule against the patenting of living matter, the government denied Dr. Chakrabarty a patent on his artificial bacteria but had granted him a patent on the living bacteria combined with “a carrier material floating on water, such as straw.” 447 U.S. at 306. Thus, the Patent Office’s message to Dr. Chakrabarty was that his newly engineered bacterium was not patentable, but with a little added straw, it was. However absurdly formalistic that approach is, it may be more attractive than enforcing the nonstatutory restriction with a functionalist approach, which requires further departures from the statutory text, plus the development of an extensive jurisprudence on the degree and appropriateness of the connections with the machine or transformation.

Since it has begun enforcing its machine-or-transformation test, the government has vacillated between the two approaches to this dilemma. For example, the agency has interpreted its machine-or-transformation rule to hold unpatentable process claims that were expressly stated to be “executed in a computer apparatus” because “[a]ny and all computing systems will suffice, indicating that the claim is not directed to the function of any particular machine.” *Ex parte Langemyr*, slip op. at 22 (BPAI May 28, 2008) (available at <http://www.uspto.gov/web/offices/dcom/bpai/its/fd081495.pdf>). Similarly another decision reasoned that computerized invention was outside of patentable subject matter because it would “cover any and every possible digital computer for executing the [claimed] transformer program.” *Ex parte Snyder*, slip

op. at 22 (BPAI May 12, 2009) (*available at <http://des.uspto.gov/Foia/ReterivePdf?system=BPAI&flNm=fd20084598-05-12-2009-1>*). These decisions threaten to undermine a substantial number of meritorious and valuable patents, even though such inventions seem to fit the statutory definition of a “process” because they provide new uses for existing general purpose computers.⁹

Yet the agency has not been consistent. For example, U.S. Pat. No. 7,426,488 (2008) on a valuation method for private equity investments was issued to two prominent Harvard Business School professors and their co-inventors. The patent used “software-on-a-disk” claiming format to cover a “computer program product, disposed on a computer readable medium,” with “instructions for causing a processor” to undertake a certain new financial analysis of private equity investments. *Id.* at col. 10. Such a software invention is of course designed to work on any general purpose computer.

Similarly, in *Ex parte Dickerson*, slip op. at 16 (BPAI July 9, 2009) (*available at <http://des.uspto.gov/Foia/ReterivePdf?system=BPAI&flNm=fd2009001172-07-09-2009-1>*), the agency sustained the patentability of

9. See, e.g., John F. Duffy, *The Death of Google’s Patents?* (*available at http://www.patentlyo.com/patent/law/google_patents101.pdf*) (discussing the PTO’s enforcement of its machine-or-transformation test and the implications for valuable software patents such as Google’s PageRank™ search engine patent).

computerized methods because they “include[d] a step of outputting information from a computer (FF 7 and 9-10) and therefore, are tied to a particular machine or apparatus.” Finally, in another case, the agency tried to articulate what appears to be an intermediate position under which claims to computerized inventions would be patentable if the process “uses two computing devices” but not if it “uses a single computer.” *Ex parte Wasynczuk*, slip op. at 22 (BPAI June 2, 2008) (available at <http://www.uspto.gov/web/offices/dcom/bpai/its/fd081496.pdf>). Such a test would seem to produce many uncertainties in an era in which even inexpensive computers contain dual processors operating on a single chip (e.g., Intel’s Centrino Duo®).

The uncertainties stemming from the agency’s first year of experience with this new test are now widely acknowledged.¹⁰ While the lower courts may attempt to develop this area of law “in the classic old English model,”¹¹ they will be doing so without any assistance from statutory text. Moreover, even the patent-expert Federal Circuit and its predecessors have demonstrated the difficulty of developing stable common law in this area: The *Bilski* en banc decision is the third attempt in three decades to announce a comprehensive test to govern the judicial limitations on the text of § 101, and

10. See Tony Dutra, *Chief Judge Michel Says Commentary Reading Too Much Into Bilski Opinion*, 78 Pat. Trademark & Copyright J. (BNA) 373 (July 24, 2009) (quoting Chief Judge Michel of Federal Circuit as stating that the BPAI had taken “inconsistent approaches” to the machine requirement since the *Bilski* opinion was published).

11. *Id.*

each test was abandoned to make way for the new.¹² Patentability tests that cannot survive even half the life of a patent do not instill confidence in the solidity of the property rights system.

2. Business Method Exception.

Various amici and one judge below have suggested that this Court should impose a prohibition on all “business method” patents. This Court was previously presented with a chance to endorse a “business method” exception to patentability. In *Dann v. Johnston*, 425 U.S. 219 (1976), the Court declined to rule on whether a computerized method for maintaining bank records and processing checks constituted patentable subject matter, even though the Government devoted the vast bulk of its briefing to that issue and specifically argued that the process should be unpatentable because “[t]he federal courts have repeatedly held that ideas for methods of doing business are not patentable” and “patents on methods of transacting business would destroy legitimate competition.” Br. for Petitioners at 22 n. 18 & 21, in *Dann v. Johnston* (No. 74-1033). The Court declined that prior invitation, and instead focused on the obviousness of the alleged invention, which is often the core problem with patents that thwart legitimate competition.

12. The court below disavowed the “useful, concrete and tangible” test first set forth in its last en banc case addressing the issue, *In re Alappat*, 33 F.3d 1526, 1544 (Fed. Cir. 1994) (en banc). *Alappat*, in turn, supplanted the “*Freeman-Walter-Abele*” test, which derived from three cases decided between 1978 and 1982. See *AT&T Corp. v. Excel Communications, Inc.*, 172 F.3d 1352, 1359 (Fed. Cir. 1999) (describing the *Freeman-Walter-Abele* test as having “little value” after *Alappat*).

The arguments for a business method exception have not improved since 1976. For example, in his dissent below, Judge Mayer argued that “the framers were well aware of the abuses that led to the English Statute of Monopolies and therefore ‘consciously acted to bar Congress from granting letters patent in particular types of business.’” Pet. App. at 107a (quoting *In re Comiskey*, 499 F.3d 1365, 1375 (Fed. Cir. 2007)). But the history shows that the English Crown was conferring patent monopolies for common pre-existing products such as vinegar, salt, horns, iron, bags, bottles, etc. See 1 Walter F. Rogers, *The Law of Patents* 264 (1914) (listing the abusive grants). The problem with these grants was not that they covered business activity—all patents restrict business activity in the same sense that those patents did—but that they covered *existing* products and businesses “which had long before been enjoyed by the public.” *Graham v. John Deere Co.*, 383 U.S. 1, 5 (1966). The solution was not to prohibit patents on business methods but to prohibit patents on things that are not *new*.

Modern law provides even more protection against the potentially abusive patents. Under the statutory obviousness doctrine, the courts have an effective tool designed to restrict the patent system to “those inventions which would not be disclosed or devised but for the inducement of a patent.” *Id.* at 11. This Court itself has recently re-emphasized the importance of the nonobviousness requirement in eliminating patents that “might stifle, rather than promote, the progress of useful arts.” *KSR International Co. v. Teleflex, Inc.*, 530 U.S. at 398, 427 (2007). Thus, given the *Graham/KSR* framework, the relevant policy issue for business method

patents is whether patents should be available for new and useful business methods that would otherwise *not* be “disclosed or devised.” Even the dissenting judge below presented no policy reason for why society would be better off if certain useful business processes remain unrevealed or undiscovered.

Judge Mayer also argued below that “useful arts” should be construed to mean “technology.” Pet. App. at 112a. There are three problems with that line of argument. First, refocusing the inquiry from “art” and “useful arts” to “technology” or “technological” merely substitutes modern words that have similarly broad and perhaps even less well-defined meanings than the statutory language.

In the modern era, technological means “of, relating to, or characterized by technology.”¹³ Technology, in turn, means variously “the practical application of knowledge in a particular area,”¹⁴ “a manner of accomplishing a task especially using technical processes, methods, or knowledge,”¹⁵ “the science of the application of knowledge to practical purposes,”¹⁶ “the application of scientific knowledge to practical purposes in a particular field,”¹⁷ or a “technical method of achieving a practical

13. *Webster’s Third New International Dictionary* 2348 (1963); *Merriam-Webster’s Collegiate Dictionary* 1206 (10th ed. 2001).

14. *Id.*

15. *Id.*

16. *Webster’s Third*, *supra* note 13, at 2348.

17. *Id.*

purpose.”¹⁸ Finally, “technical” means “having special usu[ally] practical knowledge, especially of a mechanical or scientific subject,” or “of or relating to a practical subject organized on scientific principles.”¹⁹ Thus, one fair definition of technological is “characterized by the practical application of knowledge in a particular field.”²⁰ Under this definition, innovations in business, finance, and other applied economic fields plainly qualify as “technological.”

Second, if a more narrow definition were selected—e.g., Judge Mayer preferred to define technology as “application of science, especially to industrial or commercial objectives,” Pet. App. 117a—such a definition would seem to exclude whole fields, such as games, in which the United States has issued so many patents that the field has its own major classification and dozens of subclasses. *See* PTO Classification 273 for Amusement Devices: Games (available at <http://www.uspto.gov/web/patents/classification/uspc273/sched273.htm>).

Third and finally, even accepting the narrowest definition of “technology” advanced, modern innovations in business, finance, and the like easily qualify because they represent practical applications of economic science. Economists themselves now view their field as

18. *Id.*

19. *Id.*

20. This definition is most consistent with the Greek origins of the word, which is a combination of *technikos*, meaning “art, skillful, practical,” *Webster’s Third*, *supra* note 13, at 2348, and *logos*, meaning “word, reason, speech, account,” *Id.* at 1331.

constituting a “mathematical science” with closer affinity to physics and engineering than to liberal arts like English literature.²¹ Thus, the winners of the Nobel Prize for “Economic Sciences,” established in 1968, are selected by the Royal Swedish Academy of Sciences, the same body responsible for selecting the Nobel Prizes in Chemistry and Physics.²² By contrast the Nobel Prize for Literature is selected by the Swedish Academy, which describes itself as a “cultural institution.”²³ Similarly, the British Royal Society – which has traditionally limited its members to scientists – in 2004 conferred fellowship on its first economist.²⁴ And what is frequently considered one of the best graduate departments of economics in this country is housed in the Massachusetts Institute of *Technology*.²⁵

21. See, e.g., Giorgio Israel, *How Economics Became a Mathematical Science*, 114 *Econ. J.* F369 (2004).

22. See, e.g., The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel, http://nobelprize.org/nobel_prizes/economics/ (noting creation of economics prize); Nomination and Selection of the Laureates in Economics, <http://nobelprize.org/nomination/economics/process.html> (setting forth selection process).

23. See <http://www.svenskaakademien.se/Templates/StartPage2.aspx?PageID=ca2da03d-4623-48a1-9b01-7f450c1b59c7> (the Academy’s English-version homepage).

24. See *Nine Staff Named New Fellows of the Royal Society*, <http://www.admin.cam.ac.uk/news/dp/2004060102> (June 2, 2004) (announcing election of Partha Dasgupta).

25. See, e.g., <http://grad-schools.usnews.rankingsandreviews.com/best-graduate-schools/top-economics-schools/rankings> (showing MIT tied for first in the rankings of economics departments published by US News and World Report).

Furthermore, in the last half century, the industrial reality is that many business problems are being addressed and solved *as problems of applied science and engineering*. This extension of science and engineering was recognized over a half century ago, when Professor Herbert Simon of the Carnegie Institute of Technology noted that the new area of “[n]ormative microeconomics, carried forward under such labels as ‘management science,’ ‘engineering economics,’ and ‘operations research,’ is now a flourishing area of work” and “[m]uch of the work is being done by mathematicians, statisticians, engineers, and physical scientists.”²⁶ By the 1980s, this development had spread to the workplace, with financial firms hiring “mathematicians and physicists” to become the “rocket scientists” of their industry.²⁷ Now, fields like financial engineering and operations research are so well established that major universities (especially technological universities) have established programs, laboratories and even whole departments of engineering to address business issues in a rigorous manner.²⁸

26. Herbert A. Simon, *Theories of Decision-Making in Economics and Behavioral Science*, 49 *Am. Econ. Rev.* 253, 254 (1959).

27. Winston Williams, *The Big Board Battle to Contain the Damage*, *N.Y. Times*, Oct. 25, 1987, sec. 3, p. 8.

28. See, e.g., MIT’s Laboratory for Financial Engineering (<http://lfe.mit.edu/about/intro.htm>); Cornell’s Financial Engineering Concentration in its School of Operations Research and Information Engineering (see <http://www.orie.cornell.edu/orie/academics/meng/programdescription/options/fineng.cfm>); and Princeton’s Operations Research & Financial Engineering Department in the university’s School of Engineering and Applied Science (<http://orfe.princeton.edu/>).

The modern growth of business sciences and engineering also explains the limited number of business method patents prior to the late twentieth century and the increase in such patents in modern times. Even in a legal system with no bar to business method patents, such patents will not be sought if parties cannot satisfy the normal requirements of the patent law. Where principles of economics and business are poorly developed and poorly understood, few new true novelties will be developed; fewer still be nonobvious; and fewer still might be capable of being described and claimed in a manner sufficiently clear to satisfy the requirements of § 112 of the Patent Act.

This Court has previously seen a very similar circumstance in *Chakrabarty*. In that case, there was no historical evidence of extensive patenting of living things, and Congress had thought it necessary even to enact a special statute to allow the patenting of plants. In *Chakrabarty*, four Justices opined that this evidence demonstrated both a “common understanding” and “Congress’s understanding” that living things were unpatentable. *See* 447 U.S. at 319, 320 (Brennen, J., dissenting). However, the better view—adopted by the majority—was that living things had previously been unpatentable not because they were per se outside of the broad language in § 101 but because, in more primitive times, the cultivators of new varieties of living things could not provide a written description of their creations, including a description of how to make their creations, with sufficient detail and precision to satisfy § 112 of the Patent Act. *Id.* at 312-14.

The case for rejecting a per se exclusion is even stronger here than it was in *Chakrabarty*. Unlike in *Chakrabarty*, historical sources demonstrate that patents on business methods and other business technologies were not unknown even in the nineteenth century.²⁹ The PTO formally dropped its own per se business method rule in 1995 (well *before* the Federal Circuit's decision in *State Street Bank & Trust Co. v. Signature Financial Group, Inc.*, 149 F.3d 1368 (Fed. Cir. 1998)),³⁰ and the agency had been issuing business method patents for some years prior to its formal abandonment of its per se business method exclusion. And far from passing legislation based on the premise that the relevant subject is unpatentable (as Congress did in enacting the Plant Patent Act), Congress enacted legislation in 1999 based on the assumption that business methods were patentable.

29. See *USPTO White Paper, Automated Financial or Management Data Processing Methods (Business Methods)* iv (available at <http://www.uspto.gov/web/menu/busmethp/whitepaper.pdf>) (finding that the “business method claim format has been used in various forms throughout that period” dating back “over a hundred years” and that it has become more common because of “progress over the last century”).

30. Compare *Manual of Patent Examining Procedures* § 701.03(a), 700-14 (6th ed. Jan. 1995) (available at http://www.uspto.gov/web/offices/pac/mpep/old/E6R0_700.pdf) (endorsing the business method exception) with *Manual of Patent Examining Procedures* § 701.03(a), 700-28 – 700-29 (6th ed., rev. 1 Sept. 1995) (available at http://www.uspto.gov/web/offices/pac/mpep/old/E6R1_700.pdf) (omitting the business method exception).

III. Precedent Does Not Foreclose Reliance on the Text of § 101.

In *Parker v. Flook*, 437 U.S. 584, 589 (1978), this Court held that the holding in *Benson* “forecloses a purely literal reading of § 101.” *Flook* does not, however, mean that judicial common-law making must supplant textual analysis in deciding § 101 cases.

This Court’s precedents demonstrate that the broad general statutory language remains the primary guide to deciding statutory subject matter cases, and the Court’s departures from the text have been extremely modest. This Court has traditionally held that, despite the broad statutory language in § 101, “laws of nature, physical phenomena, and abstract ideas” are not patentable. *Chakrabarty*, 447 U.S. at 309. The first two of these categories presents little, if any, restriction on the plain meanings of the statute. As our historical analysis shows, even the broadest word originally in § 101—“art”—was restricted to the “power of doing something *not taught by nature and instinct.*” 1 *Johnson Dictionary* at n182 (available at <http://www.archive.org/stream/dictionaryofengl01johnuoft#page/n182/mode/1up>) (emphasis added).

The prohibition on “abstract ideas” is also easily reconciled with the text and structure of the statute. Section 101 expressly includes the requirement that patentable processes, methods and arts must be “useful.” An abstraction is not. The Patent Act also requires applicants (i) to provide a written description of how to make and use the invention in “full, clear, concise, and exact terms” and (ii) to define the property

rights by “particularly pointing out and distinctly claiming” the invention. 35 U.S.C. § 112. Abstract ideas could not satisfy these requirements and therefore are not processes capable of being patented.

Limiting § 101 in the way argued by the government would require a much greater departure from statutory text than that sanctioned in *Church of the Holy Trinity v. United States*, 143 U.S. 457 (1892), which is often thought to mark the outer bounds of this Court’s willingness to impose a judicial gloss on broad and controlling statutory text.³¹ In *Church of the Holy Trinity*, the Church successfully argued that the broad but clear language of a statute regulating “labor or service of any kind” should apply only to *manual* service and labor. As in this case, the relevant statutory words

31. The *Church of the Holy Trinity*’s invocation of statutory “spirit” has been controversial. See *Public Citizen v. U.S. Department of Justice*, 491 U.S. 440, 473 (1989) (Kennedy, J., concurring in the judgment) (rejecting *Church of the Holy Trinity* because “it does not foster a democratic exegesis for this Court to rummage through unauthoritative materials to consult the spirit of the legislation in order to discover an alternative interpretation of the statute with which the Court is more comfortable”); *id.* (“The problem with spirits is that they tend to reflect less the views of the world whence they come than the views of those who seek their advice.”); *Zuni Public School Dist. No. 89 v. Department of Education*, 550 U.S. 81, ___ (2007) (slip op. at 11) (Scalia, J., dissenting) (criticizing *Church of the Holy Trinity* for “disregard[ing] the plain text of a statute” and observing that “what judges believe Congress ‘meant’ (apart from the text) has a disturbing but entirely unsurprising tendency to be whatever judges think Congress must have meant, *i.e.*, *should* have meant”) (emphasis in original).

in *Holy Trinity* had broad, but clear meanings and were modified by the word “any.” As in this case, the starting point for imposing a judicial gloss was the assertion that Congress could not have intended a literal interpretation.

Beyond those basic similarities, however, this case includes numerous factors not present in *Church of the Holy Trinity*. Here, unlike in *Holy Trinity*, the statute has been in place for hundreds of years, and Congress has done nothing other than to *add* broad language to the existing broad language. Here, unlike in *Holy Trinity*, the key statutory term (“process”) has an express definition, which contains other broad but clear words. Here, unlike in *Holy Trinity*, the relevant statutory language underscores Congress’s understanding that the language in the statute is sweeping broad. By contrast, in *Holy Trinity*, some congressional reports expressly stated that legislators “believ[ed]” the language would be construed narrowly to encompass only labor “manual in character.” *Id.* at 464.

Finally, in *Holy Trinity*, the statute already contained several exceptions, all of which tended to confirm that Congress’s overarching policy was more limited. In the Patent Act, however, Congress has maintained a long tradition of broadly defining patentable subject matter. Rather than restricting patentable subject matter, Congress has adjusted the rights applicable to certain classes of patents. *See, e.g.*, 35 U.S.C. §§ 181-188 (imposing certain restriction on patents for inventions that may be detrimental to the national security); § 287(c) (restricting remedies for

patents for surgical methods). Congress has already made one such adjustment to accommodate business method patents. *Id.* § 273. In these circumstances, the case for a departure from the literal language of the statute is extraordinarily weak.

IV. The Decision in this Court Should Be Limited to the Questions Presented.

Bilski's claims are properly categorized as a "method" for managing certain types of risk in the purchasing of commodities, and they therefore fall within the literal language of a process as defined by Congress in § 100(b). To satisfy § 101, however, Bilski's claimed method must not be an abstract idea, physical phenomenon, or principle of nature (limitations that *are* reflected in the text and structure of the Patent Act).

In the Court of Appeals, the PTO argued in the alternative that Bilski's claims failed to qualify as patentable subject matter because they were abstract ideas. We take no position on that issue but note one final point.

Whether Bilski's particular invention is an unpatentable abstract idea is not fairly included within the questions presented here, was not decided by the court below, had not been the focus of briefing in this Court, and is a fact-bound question of little importance to the patent system. Accordingly, there are strong prudential reasons for this Court to limit its decision to the questions presented.

CONCLUSION

The Court should reverse the decision below and remand the case to the Court of Appeals.

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