The Multiple Unconstitutionality of Business Method Patents: Common Sense, Congressional Choice, and Constitutional History

Malla Pollack, American Justice School of Law
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*61 THE MULTIPLE UNCONSTITUTIONALITY OF BUSINESS METHOD PATENTS:

COMMON SENSE, CONGRESSIONAL CONSIDERATION, AND CONSTITUTIONAL HISTORY

Malla Pollack [FN1]

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*62 I. Introduction
Business method patents are of sufficiently doubtful constitutionality that the Supreme Court should either render them void or, at the least, require a clear Congressional fact finding that they are likely to promote the "Progress of . . . [the] Useful Arts." [FN1] Four separate arguments support this conclusion. First, common sense shows that patents on business methods do not promote progress. Second, Congress has not considered whether business method patents are likely to promote progress. Third, "useful arts," as that phrase is used in the Constitution, does not include mere commerce. Lastly, the historical background of the Intellectual Property Clause [FN2] demonstrates that the ratifying generation would have considered business method patents abusive of the basic rights of Englishmen. The ratification background and the history of early patent practice also support argument three.

Consider the following hypothetical patent:

I claim:

(1) A method of doing business comprising:

(a) loading trade goods on a vessel in a port of the northeastern American continent;

(b) without voyaging to either the British Islands *63 or the European mainland, proceeding with this vessel to a port in China and there selling the trade goods and acquiring other merchandise, and;

(c) without voyaging to either the British Islands or the European mainland, returning the aforementioned vessel to a port of the northeastern American continent. [FN3]

(2) The method described in claim one, where the vessel takes on furs on the Northwest coast of North America on its way to China. [FN4]

(3) The method described in claim one, where the vessel is below 175 tons burthen. [FN5]

(4) The method described in claim one, where the vessel's return voyage is financed, at least in part, by a loan *64 from a creditor in the Chinese port, with the vessel or its cargo serving as
These business method claims probably would have been novel, useful, and not obvious to a person of ordinary skill in the art of international trade in 1780. However, would these claims have stated patentable subject matter under the Patent Act of 1790? That act allowed the Patent Board to grant protection to "any useful Art, Manufacture, Engine, Machine, or Device, or any improvement therein . . . ." Competition demonstrates that no such patent was issued, even though the China Trade was a matter of great pride in American entrepreneurship, perhaps being "the quintessential business innovation of the 1780s . . . ."

We have good reason to doubt that such patent claims would have been issued - not just because the Board had discretion to deny patents, but also because business method patents seem outside the 1790 understanding of either the Patent Act or the *65 enabling clause of the United States Constitution: "business" was not considered among the "useful arts." These hypothetical claims seem, in fact, quite close to the then-current archetype of an abusive "monopoly," allowable, if at all, only after individualized legislative scrutiny. The seemingly uncontroversial nature of the Intellectual Property Clause affirms that the ratifying public did not read it as to allow exclusive rights to trading companies, i.e., odious monopolies, i.e., business method patents.

The above arguments rest on history. Additionally, common sense suggests that business method patents are unnecessary and anti-competitive, and, therefore, unconstitutional because they do not promote the progress of the useful arts. "Promoting progress" is a limit on Congress' patent power, which renders extremely unwise decisions unconstitutional. The constitutional limitation may not be avoided by claiming power under a more general clause, such as the Commerce Clause. The Necessary and Proper Clause is also unavailable because it may not be used to negate constitutional limits or to empower Congress to pursue a goal not entrusted to the federal government. So far, however, no case law sets the standard of scrutiny the courts should use when considering whether Congress has bypassed the progress limit.
Additionally, the Constitution seems to require Congress to make a rational decision that business method patents promote the progress of the useful arts. Congress has not done so.

The rest of this article explains these four arguments.

II. The Unacceptable Origin of Business Method Patents

The recent explosion of business method patents was prompted by judicial interpretation of muddy congressional wording. In 1998, in State Street Bank & Trust Co. v. Signature Financial Group, Inc., the United States Court of Appeals for the Federal Circuit simultaneously enlarged the scope of patents on computer programs and announced the non-existence of a "business method" exception to patentable subject matter. [FN16]

The Federal Circuit phrased its State Street holdings as decisions on statutory construction. [FN17] The leading Supreme Court cases also purport to deal exclusively with statutory construction. [FN18] The statutory phrase at issue is 35 U.S.C. §101, *67 which lists as patentable subject matter "any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof. . . ." [FN19] "Process" was substituted for "art" by the 1952 Patent Act. [FN20] According to the accompanying Senate Report, the case law had interpreted "art" as "practically synonymous with process or method." [FN21]

In State Street, the Federal Circuit laid "to rest" the "ill-conceived" business method exception to patentable subject matter on two statutory grounds. [FN22] First, the statute says "any." [FN23] Second, Congress has defined § 101 as including "anything under the sun that is made by man." [FN24]

The Federal Circuit erred.

The Senate Report was not discussing processes; it may not have been expressing expansive intent. The Report was discussing "machine[s]" and "manufacture[s]," and clarifying a limit on patentability. The entire one sentence paragraph reads as follows:
A person may have 'invented' a machine or 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. [FN25]

The Federal Circuit did not notice that the Report says "may" not "shall." [FN26] Additionally, the Federal Circuit overlooked the "process" aspect of "business methods," perhaps because it had just construed independent claim one as "directed to a machine." [FN27] No similar language in the Report declares that Congress intended "process" to have this wide a reach. [FN28] The Federal Circuit, furthermore, overlooked the Supreme Court's growing reluctance to rely on legislative history. [FN29]

The Federal Circuit, additionally, did not ask whether granting "business method" patents is a good idea. Nor did it claim that Congress had ever investigated or discussed whether business method patents are sufficiently likely to promote the progress of the useful arts to warrant patent protection. The Federal Circuit did not ask if "Useful Arts" in the Constitution included "business methods."

I think someone should.

Why should you care? First, courts do not have the institutional competence to decide the societal result of creating a new category of patentable subject matter. Business is different in this respect than, for example, gene splicing. Gene splicing is one unanticipated form assumed by anticipated progress in a category already clearly included in patentable subject matter - medical technology. The Patent Act says "any" to allow such inventions to be patentable without congressional action. Business methods are different, however, because business has always been with us and yet never covered by patent law.

Second, narrowing judicial oversight to the statute allows Congress almost limitless power to grant patents. Worse, Congress does not consider each patent; instead an administrative agency, the United States Patent and Trademark Office ("USPTO") is required to grant patents to a
widening class of applicants unless the USPTO can document obviousness. [FN30] The logic in State Street, therefore, places the burden on the party alleging non-patentability; the default position is that anyone who originates any non-obvious anything has the right to patent protection, but this turns a mere means into a goal. The Supreme Court has repeatedly stated that the primary purpose of Congress' constitutionally based intellectual property power is to enrich the public domain, not to enrich authors or inventors. [FN31]

III. Defining a "Business Method Patent" *70 By business method, I mean a process where the point of invention lies in the entrepreneurial strategy. [FN32] Acceptable technological grants, in contrast, generally involve invention of novel physical objects or novel physical manipulation of physical objects.

When the point of invention is some object or machine, the patent clearly is not for a business method. Separating business methods from other processes is more difficult - especially in light of the ability to draft a patent so that an activity turns into a means-plus-function "machine," as occurred in State Street. We can prevent such "sleight of word" by focusing on the point of invention, not the entire claim. [FN33] This is the central insight of the dissent in Diamond v. Diehr; [FN34] it is also the position taken by Congress in the First *71 Inventor's Defense Act recently enacted as a minor limit on business method patents. [FN35] This interpretation, furthermore, is more attuned to the constitutional and statutory texts. Congress may grant to inventors only "exclusive [r]ight[s in] their . . . [ d] iscoveries." [FN36] Congress has only granted to "[w]hoever invents or discoverers" something "new and useful" the right to obtain a patent "therefor," i.e., in the res invented. [FN37]

Consider the hypothetical claim at the beginning of this paper: it is a business method claim because the allegedly non-obvious insight is the profitability of a series of commercial actions. This claim does not teach a new method of manipulating physical objects, such as the cargo to be loaded on the ship. In 1780, people knew how to load ships in port; they knew how to sail a ship.
from New England to China without stopping in England or Europe; they knew how to sail a ship back. The inventive insight is that this series of actions is likely to earn a profit. Ships are "manufactures" as that term is used in § 101. The point of invention, the allegedly non-obvious addition to human knowledge, however, is not an aspect of the ships; it is an aspect of commerce. The point of invention does not change if I redraft the patent to claim "a ship which is loaded in a port of northeastern North *72 America . . . ."

Consider a more modern example: Federal Express' overnight delivery service. I would accept as a machine patent a claim to a new truck or mechanical package sorter. I would accept as a process patent a claim for a non-obvious method of wrapping packages using pre-existing types of tape and paper. What I would like excluded as a "business method" claim is the entrepreneurial insight that a business can make money by guaranteeing overnight delivery to a mass market.

The wrapping claim is not, according to my definition, a business method claim because the insight is not the ability to earn money by doing something previously possible but believed unmarketable. The wrapping claim involves a new method of physically manipulating physical objects. The physical manipulation is the alleged point of invention.

State Street raises many issues besides "business method patents." It raises the issue of whether computer programs, "machines . . . that have been constructed in the medium of text," [FN38] should be entitled to both patent protection as "machines" [FN39] and copyright protection as "literary works." [FN40] It raises the issue of the scope of unpatentable mathematical principles. It raises the stakes for high quality assessment of non-obviousness before a patent is issued. [FN41] This article *73 discusses none of these interesting issues. It deals only with the possible unconstitutionality of patents on methods of doing business. For the rest of this article, therefore, I will assume that we can segregate business method patents despite the difficulties. [FN42]

The United States Patent and Trademark Office ("USPTO") is the government agency expert
in patents. What does it say publicly about business method patents?

In an attempt to deflect criticism, the USPTO issued an apologia ("White Paper" [FN43]) asserting that business method patents are as old as the United States patent system. The White Paper asserts that "[b]usiness data processing has followed an unbroken evolutionary path from mechanical technology up to today's software controlled microprocessors" and that "[t]he business method claim format has been used in various forms throughout that period." [FN44] Today's expansion, *74 the USPTO insists, is merely "the beginning of a change in the approach to how inventors choose to describe their inventions." [FN45]

The business method line allegedly begins with a patent granted to Jacob Perkins on March 19, 1799 for a system of "Detecting Counterfeit Notes." [FN46] Records of the patent were lost in the Patent Office fire of 1836 so we can only guess at its content. [FN47] The next alleged business method patent located by USPTO research is John Kneass' patent on "A Mode of Preventing Counterfeiting" issued April 28, 1815. [FN48] His claimed improvement is "to print copper plate on both sides of the note or bill, or copperplate on one side and letter press on the other side, or letter press on both sides of a bank note or bill as an additional security against counterfeiture." [FN49] From this and similar patents on paper technology, the USPTO traces the line through inventions in automated business machines. [FN50] Next, the USPTO elides the difference between physical object and method:

Put another way, we invented some automated business data processing methods over the last one hundred years, but we spent the bulk of that time perfecting the automated business data processing machines upon which we will run the methods. It is only recently that data processing systems have become sufficiently developed to begin to allow us *75 to fully tap our ingenuity in the business method arts. [FN51]

I gasp. The USPTO wants us to believe that it found no records of patents whose points of invention were business methods, because no one had time to invent any new business methods until the human race had run its mechanical ingenuity to the peak of computer software; seem-
ingly we were all too busy inventing the computer to think about anything else--especially new ways of doing business. I thought that we granted patents because, otherwise, people would be too busy making money by running businesses to take time out to invent anything except business methods. The USPTO White Paper, furthermore, is eliding the printed matter exception [FN52] to patentable subject matter with the business method exception. Thinking machines and paper forms may be problematic patentable subject matter, but they raise different problems than business methods.

I repeat: by business method patent, I mean one where the claimed point of invention lies in the entrepreneurial strategy.

IV. Promoting Progress: Two Short Arguments for the Unconstitutionality of Business Method Patents

A. The More Sweeping Argument: Common Sense

Patents exist to encourage people to invest in working out useful inventions, even though these inventions might not immediately be sufficiently marketable to repay the investment solely through first-mover advantages. Since business methods are "useful" when they directly earn revenue, they are *76 inherently unlikely to be under-produced due to market failure - in direct contrast to more conventional patentable subject matter. To translate this argument into constitutional language, we do not need to give an entrepreneurial inventor exclusive rights in order to encourage the inventor to promote the progress of the entrepreneurial "art." If we grant rights to exclude unnecessarily, we raise prices and limit competition with no quid pro quo. Retarding competition retards further development; raising prices retards dissemination, retarding progress. Furthermore, unlike other models, United States patent law allows a patent holder to prevent all use of the claimed technology. [FN53]

Again, my opening hypothetical patent and the Federal Express delivery service are clarifying examples. As discussed earlier, the hypothetical patent was not issued even though it in-
Involved changes in practice which were not obvious to the ordinary 1780s export merchant. Subsequently, United States-China trade flourished. [FN54] Similarly, when Federal Express was started, the service was decidedly not obvious to a person of ordinary skill in the entrepreneurial arts. Yale University gave Frederick Smith a "C" for his term paper on the need for overnight air delivery. Smith started Federal Express' overnight delivery service in 1973; by 1976, it was a large, *77 profitable business. [FN55] Overnight delivery is no longer a novelty. An internet search for "overnight delivery" reported 171,000 hits; [FN56] another retrieved consumer feedback to help any would-be customer decide between five major competitors. [FN57] As to overnight delivery services, progress has been served without limiting competition.

In sum, business method patents are not likely to promote progress. They are, therefore, not constitutional.

A weaker version of this argument follows.

B. The Weaker Argument: Congressional Consideration

Congress has not decided that business method patents promote progress. I have found no evidence that when Congress first passed § 101 in 1790, or changed its language in 1952, Congress thought about business method patents to decide if they were likely to promote the progress of the useful arts - or progress of any kind. I know of no hearings on the subject, no committee report, no blue ribbon commission which investigated and, based on that investigation, recommended wording § 101 broadly enough to include business methods. [FN58]

Discussions of a wish to allow the patent statute to automatically cover new areas of scientific and technological discovery are not relevant. Business is not a new area of discovery branching out from an already known, patentable field. Business methods historically have not been protected *78 by patents even though business predates patent systems.

Yes, Congress did enact the First Inventor Defense Act, [FN59] but the accompanying report
makes no mention of any congressional finding that business method patents promote progress.  
[FN60] The Act appears to be a stop-gap measure to protect particularly vulnerable businesses until Congress has time for full consideration. Several congresspersons have publicly called for a thorough investigation of the progress implications of business method patents. [FN61]

*79 Business methods, furthermore, have an obviously unique interplay with progress. The furor raised by State Street is ample confirmation. [FN62] Relatedly, the United Kingdom's patent office did investigate the issue and decided against allowing patents on methods of doing business. [FN63]

*80 I admit that the Supreme Court has yet to hold that Congress is required to make findings, hold hearings, or even discuss a change in the intellectual property statutes because the Constitution requires such rights to promote progress. [FN64] So far, the Court has discussed patent scope (and copyright scope) largely as matters of statutory construction - despite many off-hand references to the empowering constitutional clause. [FN65] The most famous exceptions are Feist Publications, Inc. v. Rural Telephone Service Co. [FN66] and Graham v. John Deere Co. of Kansas. [FN67] The statute sections at issue in both of these cases, however, had been enacted after hearings, committee reports, and congressional discussion. These cases demonstrate, however, that the Court is willing to take the Intellectual Property Clause seriously, at least on occasion. [FN68]

*81 In summary, the public furor over State Street demonstrates that business method patents should not be treated identically to patents on technology. Congress has not determined that business method patents are likely to promote progress, therefore, they are not constitutional. This argument is weak because Congress can trump this objection merely by considering business method patents and disagreeing with my conclusion.

I can, however, offer two more arguments focusing on the phrase "useful arts."

V. "Useful Arts": The Historical Arguments for the Unconstitutionality of
Business Method Patents

The current Supreme Court endorses a historical method of interpreting the Constitution, focusing on how its language would have been read by the ratifying generation. [FN69] This article, therefore, marshals historical material to enable a holding that Congress has no power to authorize business method patents because the eighteenth century meaning of "useful arts" does not include entrepreneurship.

While the complexity of history prevents a slam dunk victory over the Federal Circuit's statute-reading, I can demonstrate that including entrepreneurship within the "useful arts" is doubtful. I believe that the historical showing is sufficient to at least raise serious constitutional doubts, thus supporting a different reading of the ambiguous statute. [FN70]

This material also supports the conclusion that the ratifying generation believed that business method monopolies were a denial of basic liberty - with the possible exception of grants individually approved by a representative legislature. The Intellectual Property Clause, therefore, would have been extremely controversial if it had permitted exclusive rights in commerce; since the clause generated no controversy during ratification, presumably, the ratifying generation did not read the clause as empowering patents on business methods.

The Constitution, however, does not contain an anti-monopoly clause outside the negative implication in the Intellectual Property Clause. Congress, therefore, is entitled to create business monopolies if these are fully outside the patent system.

Again, the Court should void business method patents - at the very least until Congress conducts a targeted investigation and creates a sui generis system for granting exclusive rights to conduct business - rights unrelated to promoting progress in the useful arts. In light of ongoing deregulation of regulated industries, however, Congress seems unlikely to create a new administrative agency to issue exclusive business licenses.

A. A Few Opening Clarifications
This subsection removes two possible distractions - the definition of "invention" and the pedigree of process patents - by demonstrating their irrelevance to the relevant time period in the legal history of Great Britain and the United States.

First, between 1624 and 1793, the term "invention" included importing known technology into territory where it had not yet penetrated. The invention exception in the Statute of Monopolies, the British forerunner of the Intellectual Property Clause, permitted rights granted to "the first and true inventor" of "[N]ew Manufactures." [FN71] From its inception until well past 1793, this language was consistently interpreted to allow patents granted to importers of technology invented (in our terminology) by others. [FN72]

During this period, the United States had not yet refused this construction of "inventor" in the Intellectual Property Clause. George Washington's first State of the Union Address to Congress includes a request to "giv[e] effectual encouragement to the introduction of new and useful inventions from abroad, as to the exertions of skill and genius in producing them at home." [FN73] One of the first introduced patent bills would have allowed importation patents. [FN74] Language expressly permitting importation patents was deleted before the bill became the Patent Act of 1790, possibly because of constitutional questions. [FN75] Alexander Hamilton's Report on the Subject of Manufactures also notes constitutional doubt regarding Congress' power to grant importation patents. [FN76] The Patent Act of 1790, however, did not unequivocally ban importation patents, and several of the fifty-seven patents issued under this act were granted to importers. [FN77] The first court decision stating that Congress lacked the power to grant patents of importation was not issued until 1812. [FN78]

Second, "process" patents are this old. John Roebuck and S. E. Garbett, for example, obtained a patent in 1771 for a "method of making acid spirit by burning sulphur and saltpetre, and collecting the condensed fumes." [FN79] The claimed "material discovery [was described as using] leaden vessels instead of vessels of glass" with no claim that the vessels themselves were novel. [FN80] Turner's Patent was granted in 1780 for "a method of producing a yellow col-
our for painting in oil or water, making white lead, and separating the mineral alkali from common salt, all to be performed in one single process." [FN81] The inventor's specification did not mention machinery of any kind. [FN82] The 1795 leading British case of Boulton & Watt v. Bull was commonly read for the proposition that processes which created vendible items were valid if the processes were described with sufficient precision. [FN83]

Early British patent treatises agree. A leading 1808 work went beyond Boulton and Bull in approving process patents, explaining that "when the effect produced is no new substance or composition, the patent can only be for the mechanism, if mechanism be used, or for the process, if it be a new method of operating with or without old mechanism." [FN84]

Early critics of process patents admitted that patents were routinely issued on discoveries described as methods. The critics merely wanted attorneys and judges to interpret these grants in a technical manner that, I doubt, would have been understood by most inventors. John Coryton's 1855 treatise on the patent law of Great Britain, for example, rails against the misinterpretations of admittedly numerous other authorities who teach that a process may itself be protected by a patent. [FN85] In Coryton's view, the multiple cases which seem to approve the patentability of methods should be read to protect only the *86 vendible product produced by that new method, i.e. as product-by-process patents. [FN86]

Processes were always patentable in the United States. [FN87] The first patent act allowed patents on "any useful Art, Manufacture, Engine, Machine, or Device, or any improvement therein" [FN88] with "useful Art" meaning "process." [FN89]

We cannot blithely assume, therefore, that the absence of early business method patents is explained by the absence of patent protection for processes in general. The criticisms, on the contrary, support my argument that invention patents were limited to the technological arts - innovative manipulation of physical objects, or innovative physical objects. Business methods were not patentable inventions.
B. The Meaning of the Phrase: "Useful Arts"

What would an eighteenth century American reader of the Constitution understand to be the limits of "useful arts"? While not provable beyond any doubt, the best answer seems the mechanical arts, which do not include the mysteries by which merchants conduct commerce. The current term for "mechanical arts" is "technological arts." [FN90]

Consider the comment included in Noah Webster's first American dictionary at the definition of "art": [FN91]

*87 1. The disposition or modification of things by human skill, to answer the purpose intended. In this sense art stands opposed to nature. Bacon. Encyc.

2. A system of rules, serving to facilitate the performance of certain actions; opposed to science or speculative principles; as the art of building or engraving. Arts are divided into useful or mechanic, and liberal or polite. The mechanic arts are those in which the hands and body are more concerned than the mind; as in making clothes and utensils. These arts are called trades. The liberal or polite arts are those in which the mind or imagination is chiefly concerned; as poetry, music and painting. [FN92]

Robert I. Coulter, similarly, defines "useful arts" as "mechanical arts" [FN93] after consulting other sources, both *88 American and English. [FN94] Coulter specifically identifies the art of business as not one of the "useful arts," though, of course, it was both an art and useful. [FN95] To Coulter, the closest twentieth century equivalent to the "useful arts" is the "technological arts." [FN96] John R. Thomas concurs [FN97] and approvingly points out the analogous "industrial application" limitation in both the European Patent Convention and the Japanese Patent Act. [FN98] Industrial application requires "a teaching for systematic activity using controllable natural forces for the attainment of a causally predictable result [;]" [FN99] it does not include business methods. [FN100]

One could reach the same conclusion by asserting that "useful arts" is intended to be syn-
onymous with "New Manufacture" in the Statute of Monopolies. [FN101] "Manufacture" is the basis for the early British treatises which argue for a technical reading of process patents as product by process *89 grants. [FN102] I hesitate to rely on this argument because the *90 Constitution employs different terms even though its drafters would have known that "new manufactures" appears in the Statute of Monopolies. Furthermore, as discussed earlier, "inventor" appears in both documents with different meanings.

In sum, the "useful arts" are the "technological arts."

At least in dicta, the Court has already stated that Congress may not grant patents except for "advances in the 'useful arts."' [FN103] Business methods, therefore, need not apply.

Besides the linguistic data, this conclusion is supported by previous patent practice and the historical roots of the Whig fight for representative government. We need to focus on the period from 1624 through 1793.

C. Historical Support for the Meaning of the Phrase: "Useful Arts"

The historical material in this section has two functions. First, it demonstrates that the linguistic evidence is reliable; neither "Manufactures" nor "Useful Arts" included mere commerce. [FN104] Second, it supports the more complex claim that the ratifying generation did not agree to invention patents on advances in trade itself, because trade monopolies were odious. Such monopolies were especially odious if granted by any authority other than a representative legislature performing individualized cost/benefit analysis on each grant. If the Intellectual Property Clause had been perceived to enable patents for business methods, we should have found loud Anti-Federalist rhetoric attacking it; we should have found major Federalist apologia defending it. We have neither.

*91 Trade monopolies, furthermore, were odious as an integral part of the Whig heritage - the fight for representative government. [FN105] The decision to limit protection to inventions in
the "useful arts" is not merely a quaint linguistic anachronism; it is a constitutional statement of principle worthy of respect.

I. Reviewing the Statute of Monopolies

The Intellectual Property Clause of the Constitution is a descendent of the 1624 English Statute of Monopolies [FN106] in two senses. First, the Whig founding generation recognized the Statute as the first victory of representative government against royal over-reaching. Second, the Statute purported to prevent monopolies [FN107] with a number of exceptions, including time-limited grants "within this Realm" to "the true and first Inventor" of any "Manner of New Manufactures." [FN108] The Statute, however, had many other exceptions, including grants to corporations and grants made by Parliament. [FN109]

Determining the understood scope of the exceptions for inventions is difficult because early English record-keeping practice combined many different types of grants. [FN110] Until the 1852 legislation creating the invention-only British Patent Office, [FN111] the procedure for obtaining a patent of invention was governed by the 1536 Clerks Act and involved up to ten different offices. [FN112] Tudor and early Stuart materials have been sorted by historians using later-created distinctions. Hulme's historical articles, for example, combine patents on inventions, some corporate charters, and an occasional license. [FN113] Elsewhere, I have argued that contemporaries would have grouped Hulme's choices with charters to guilds, grants to overseas trading companies, and licenses to grant dispensations to statutes. All were part of a gigantic monarchical edifice of indirect finance used to bypass Parliament's control of certain forms of direct taxation. [FN114]

The pre-civil war English materials do evidence that some novel business methods were loudly denounced as abusive violations of the mythical, ancient constitution of English liberties - but "abusive" versus "non-abusive" is not the same dichotomy as "New Manufactures" versus "not New Manufactures." The Tudor and early Stuart monarchs began the abusive trade of licensing private persons to locate "concealed lands," estates belonging to the Crown but not in-
cluded in Crown records. [FN115] Parliament also decried royal *93 grants allowing private persons to sell licenses to run alehouses and inns, [FN116] locate concealed tythes, dispense with regulations on peddlers, dispense with regulations on apprentices, charge new fees for legal processes, [FN117] and sell permission to build slums around London. [FN118] Complaints also abounded about James I's innovative side business of selling titles of nobility and knighthoods. [FN119]

In sum, pre-civil war records are unhelpful on the scope of subject matter then viewed to be within the bounds of invention-related patents.

2. English Practice 1642-1790

Like the Tudor and Stuart records, those from the Commonwealth and Protectorate periods are unhelpful because we have no contemporaneous classification. From 1642 through 1660, the printed indexes of the Patent Office show a blank; England had more pressing activities than keeping well organized paperwork. An enterprising scholar, however, has *94 located official references to twenty-one different grants or grant applications based on claims of invention: [FN120] two for making textiles, one for smelting iron, four for drainage engines, one for improving land, one for tanning leather, two for making salt, one for a method of mending highways, four for military machinery, one for a machine to raise sunken ships, one for a writing instrument, [FN121] two for various types of boilers, and one for producing cleaner-burning fuel [FN122] - but no business methods.

After 1660, some separation of patents of invention from other grants is possible by understanding the process, which had become administrative rather than purely political. The applicant would file a petition couched as a claim in a new invention. Possible opponents could learn of pending applications by filing "caveats," requests for notification of any petition in certain subject matter. [FN123] Absent caveat, most petitions were issued without examination. [FN124] The number of issued patents which would have been invalidated if challenged in a court suit is unknowable, especially in light of the scant information contained in most petitions. [FN125]
Patent applications filed after 1660, though not unanimous, support the thesis that the English did not consider invention-patentable subject matter to include business methods. MacLeod's detailed study of English patents includes a few items she terms "special licenses . . . granted under cover of a patent for invention," involving schemes for banking, lotteries, and an isolated insurance patent in 1778. One late Stuart patent revived quality inspection in the textile industry.

Discounting these isolated examples, the applications are limited to the technological arts. Patent applications filed during the late Stuart era include: methods of making salt; metallurgical processes; methods of making silk; processes for curing provisions with salt; methods of making fine soap; types of candles; types of lamps; glass-bottles; the production of indigo-powder; steam engines; types of saw mills; various sugar mills; smelting furnaces; manufacturing tin plates; dredging and drainage machines; diving machines; a wire-weaving engine; producing colored paper; a thread spinning machine; many types of ordinance; freshening salt water; and manufacturing saltpeter.

Post-Stuart patents are even more overwhelmingly technological. MacLeod lists applications for fulling mills, iron bolts, marbled paper, a writing machine, barometers and clockwork instruments, sugar mills, compounded medicines, a whip twisting engine, lacquering, a life-jacket, washing machines, a thimble making machine, methods of producing glass, machines for making hose, springs and other parts for coaches, textile manufacturing machines, bleaching processes, a type of bee hive, a process for making metallic zinc, a copying press, agricultural implements, equipment to raise mined ore to the surface, water pumps, machines for making rope, various chemical processes, distillation and brewing devices, pans for making salt, methods for making oil from various seeds, and various consumer goods.

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. [FN133] The infamous South Sea Bubble was itself a creative method of refinancing Great Britain's public debt. [FN134] The Restoration period, 1660 through 1688, saw the sudden escalation of England's "distant trades," i.e., commerce with North America, the West Indies, and the East. [FN135] Handling trade and colonies despite major time lags in communication involved entrepreneurial originality. [FN136]

In England, major inventions in farm machinery (some of which were patented) led to the spread of manufacturers specializing in selling farm machinery over a wide geographic area; this business innovation away from local blacksmiths was not patented. [FN137] The multiple patents for oil lamps were commercialized by a new type of business, private firms which contracted with householders, local governments, or other institutions to provide street lighting. [FN138] These businesses often sought exclusive contracts with government units, [FN139] but no one seemingly tried to patent the business model.

Patentees tried several other innovative ways to commercialize their patents, but none of these business methods were patented. Many patents were used as advertising as if a royal patent were a quality endorsement. This business method was especially popular for compounded medicines. [FN140] Several inventors of farm implements used copyright to restrict publication of their discoveries to expensive, limited editions. [FN141] Benjamin Habakkuk Jackson patented a "swimming engine" in 1722; his marketing method was to advertise public demonstrations. [FN142] The era saw large numbers of patents on improvements for coaches; presumably, many routes were serviced by firms with monopoly franchises, but seemingly no one patented any business model for running a carrying service. [FN143]

Another area which should have been ripe for business method patents was the organization of textile manufacturing in rural areas. [FN144] Until the introduction of high speed equipment, beginning with the flying shuttle in 1760, labor productivity did not increase significantly in the textile industry. [FN145] What was required for economic vitality was entrepreneurial skill [FN146] in, for example, dividing up work, creating routes to pick up finished products, organiz-
ing marketing channels, responding to changes in fashions for finished goods, giving credit to workers, [FN147] using machine leases to control workers, deciding where to locate larger workshops and what part of the production to assign to such workshops, organizing layers of management, and controlling worker fraud. [FN148]

If business methods were then considered patentable subject matter, why is the cupboard so exceedingly bare? Of course, many inventions clearly patentable under then-current standards were not patented for various reasons. [FN149] I cannot think of any then-existing technological area, however, which similarly lacks patent applications. Where are the business method patents?

Another complication is our current inability to be sure how far specific English patents were publicly known. Even if a handful of business method patents of invention existed, would the American colonial population have known of the existence of such oddities? Absent a caveat (and I have seen no evidence of any related to business methods), outsiders were *100 likely to have heard of a specific patent only if it were publicized by marketing or by enforcement attempts. Very few patent cases appear in the reporters for this era. [FN150] A few more have been located in Judge Mansfield's notebooks. [FN151] None of these involve business method patents. [FN152] Even if you learned of a patent and ordered a copy of the official documents, the description was likely to be so vague that you might not be sure if the invention involved a novel physical object or not. The requirement of a full description of the alleged invention started only in 1778. [FN153]

In sum, while not determinative, the evidence strongly supports my conclusion that business methods were not considered within the category of protectable inventions. Business monopolies were obtained by securing incorporation, a royal charter, or an Act of Parliament, not by filing an application for an invention patent. [FN154] These alternatives were less dangerous to competition than invention patents, because each required individualized, affirmative, high-level government approval. [FN155]
*101 3. American Practice Before the Constitution

The leading source on early American patents of invention is Bruce W. Bugbee. [FN156] Again, however, we have the hindsight classification problem. [FN157]

Perusing Bugbee's account, we find several monopolistic grants in favor of local business entities: one monopoly on trading with Native Americans, [FN158] one embargo on imported salt resulting in a monopoly by a local salt maker, [FN159] one monopoly on making iron, [FN160] and an exclusive franchise to whomever built the first dry dock in Boston or Charlestown, Massachusetts. [FN161]

Otherwise, Bugbee lists only grants on allegedly newly invented (or imported) [FN162] machines and methods of treating physical objects. [FN163] The list includes rice pounding machines, agricultural implements, water pumps, clocks, surveying instruments, steam engines, and conveyer belts. [FN164] The earliest are grants issued in Virginia in 1620 for, respectively, a method of cultivating tobacco, an "engine" for defending the colony from "force of arms," and the production of potash, *102 soap, and "various other commodities." [FN165] Someone in 1706 Massachusetts claimed to have invented a method of making saltpeter from whale flesh. [FN166] In 1714, New York rewarded an unspecified new method of catching porpoises and fish. [FN167]

We know from other sources, however, that colonies and states, after individual consideration of each, allowed numerous business monopolies - including state-chartered banks, toll bridges, and canals. [FN168] We also know that various colonies and states had anti-monopoly enactments. [FN169] This record is muddy, at best.

Again, we need to ask if a lack of clear records approving invention patents on business methods can be explained by a lack of entrepreneurial creativity. Again, historians suggest that entrepreneurial creativity was alive and well.

Fluidity was always important in the colonies. Even leaving out the sharp learning curve
needed to survive first settlement *103 starving times, prospering in the American colonies re-
quired reconsideration of English expectations and patterns of behavior. Expectations did not hold, as evidenced by the unprofitability of most of the joint-stock companies which funded the original settlements. [FN170] Colonists were less constrained by formal structures such as gov-
ernment and trade guilds then were the residents of England. [FN171] While success rates dimin-
ished over time, the colonies remained a relative land of opportunity for inventive, hard-working
people (accepting the now-unacceptable limitation to male, white and Christian). [FN172]

According to economic historians, one of the major assets of the northeastern American colonies was a large labor capital of innovative merchants. [FN173] Seemingly, the northeast de-
veloped a large merchant class because local food production was *104 complex. [FN174] Over-
seas principles might be able to run the export of tobacco or rice from large plantation sellers
without highly-trained local merchants. However, obtaining the goods to fill a ship in the small
family farm area of the northeast required more complex dealings with more numerous individu-
als. Therefore, the organizer needed to be on the spot. These on-the-spot northern merchants
eventually built their own ships and organized overseas trade in their own bottoms on their own
credit--assets important for the colonies during the Revolution. [FN175] Even in the commer-
cially less-complex south, the vagaries of agricultural and credit conditions required flexibility
from merchants, [FN176] as did the coastal trade. [FN177]

At least in the north and middle colonies, complex economic activity organized by creative
entrepreneurs spread far inland. Middlemen engaged in cut-throat competition over prices, credit
terms, bartering, and supply of the most popular *105 merchandise. Many store owners expan-
ded into product processing to handle goods accepted in barter - for example, saw mills, meat
smoking plants, and grain mills. [FN178] The pre-war years even produced experimentation in
dealing with the rising tide of impoverished city dwellers-various versions of live-in and out-
place textile manufacture. [FN179]

War did not halt entrepreneurial ingenuity. With new political units came the major new en-
terprises of organizing military supplies despite scant credit and specie, and providing loans to
the national and state governments. [FN180] Governor William Denny of Pennsylvania, for ex-
ample, profited by his innovational supplying of Frenchmen and flags of truce to merchant ships;
this allowed the merchantmen to enter enemy ports for the ostensible purpose of trading prison-
ers of war. [FN181] New forms of trade with foreign ports widened when the former-colonies
declared commercial independence of the British Navigation Acts in April of 1776. [FN182] The
decade following the Revolution saw a burst of joint-stock and incorporated business firms with
new investments in banks, turnpikes, canals, bridges, manufacturing plants, and new variations
on the ever-present land speculation. [FN183] The *106 Revolutionary War both depended on
and advanced the rise in entrepreneurial capital in the proto-United States. [FN184]

The reader should not quickly dismiss these changes as obvious. First, importation of techno-
logy known abroad was "invention." Second, many of the recently-issued business method pat-
teins are facially (even farcically) obvious to persons outside the USPTO. Third, obviousness is
manipulable. For example, consider a canal. Even if canals had existed earlier, and even if this
type of canal had existed earlier in the proto-United States, the decision that this type of canal at
this exact location with this exact toll system is likely to be profitable may not be obvious to a
person of ordinary skill in the art of managing transportation resources. Non-obvious combina-
tions of separately obvious steps are patentable. [FN185]

In sum, if any nation was ripe for invention patents on business methods, it was the newly
freed colonies of British North America. As discussed below, however, no business method pat-
teins seem to have been granted.

4. United States' Patent Practice to 1793

The United States' early practice supports the conclusion that business methods were not con-
sidered patentable subject matter. The period includes two time sections. Before the enactment of
the 1790 Patent Act, [FN186] we can look at congressional action. Afterwards, we can look at
the actions of the Patent Board. In 1793, the United States switched to a registration system,
[FN187] thus eliminating quality control. I, therefore, decline to consider post-1793 patents.

*107 During the first period, Congress received a number of petitions for grants similar to patents, but it issued none. During the first session, the petitions involved funding a trip of exploration to Baffin's Bay, [FN189] a way of using magnetic variation to discover longitude and latitude, a method of "impelling boats," a machine for determining longitude, the steamboat, an improved steam engine for manufacturing and milling, [FN190] a machine to mill nails, a wheeled boat for transversing rapids, agricultural machinery, a dredging machine, a machine for counting revolutions of wheels, mills turned by weights, shell buttons and a method to produce them, and various improvements on other machines. [FN191] During the second session, petitions involved an improved method of distilling spirits, a machine for forming type, [FN192] engines for distilling, engines for operating water mills, improvements on the steam engine, and a method of driving bridge piles. [FN193] No business method patents were requested or approved.

To the extent we can document their actions, the officers *108 (informally, the "Patent Board") enforcing the 1790 Patent Act did not grant any business method patents. Under this statute, any two of the Secretary of State, the Secretary of War, and the Attorney General of the United States had discretionary power to grant a patent on "any useful Art, Manufacture, Engine, Machine, or Device, or any improvement therein," if it was "sufficiently useful and important." [FN194] We do not have full records of the patents issued or patent applications received under the 1790 Act. [FN195] Walterscheid's wonderful book reports that fifty-seven patents were issued out of over 114 applications, [FN196] but none of the patents or applications he has located concern business methods. Typical subject matter includes machines for textile production, steam engines, agricultural implements, improvements in mills, methods of tanning leather, and methods of extracting dyes from bark. [FN197] The only located lawsuits pursuant to the 1790 Act involve Oliver Evans' patents on flour milling equipment. [FN198]
In sum, we have no record that the first United States Congress or the first United States Patent Board considered business methods to be patentable subject matter. Our records, however, are incomplete.

D. The Constitution on Monopolies: The Importance of the Phrase: "Useful Arts"

The best we can say about the Intellectual Property Clause of the Constitution is that either no one thought it was sufficiently important to discuss or no one thought it was sufficiently important to preserve notes of the discussion. This stunning lack of importance demonstrates that the ratifying generation did not believe the Clause included then-hated exclusive rights in trade, or "monopolies" -as business method *109 patents. Let us walk through the scant record.

At the constitutional convention, on August 18, 1787, the Committee of Eleven [FN199] took under consideration several suggestions for congressional powers:

To grant charters of incorporation in cases where the public good may require them, and the authority of a single State may be incompetent;

To secure to literary authors their copy rights for a limited time;

To establish an University;

To encourage by premiums & provisions, the advancement of useful knowledge and discoveries; [FN200]

To establish seminaries for the promotion of literature and the arts & sciences;

To grant charters of incorporation;

To grant patents for useful inventions;

To secure to Authors exclusive rights for a limited time;

To establish public institutions, rewards and immunities for the promotion of agriculture,
commerce, trades and manufactures;

To . . . regulate Stages on the post roads. [FN201]

On September 5, a different Committee of Eleven [FN202] submitted a report which included: "(5) To promote the progress of Science and useful arts by securing for limited times to authors & inventors, the exclusive right to their respective writings and discoveries." [FN203]

After dealing with items one through four, "[t]he (5) clause *110 was agreed to nem: con:" [FN204]

The next reference to what we now call intellectual property is the Committee on Stile's September 12 report of the entire constitution; [FN205] the committee's draft includes in Article One, section eight, "They [the Congress] shall have power . . . To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." [FN206]

A few possibly relevant issues were raised, but not adopted, in the last minute discussions: a bill of rights, [FN207] sumptuary laws--including a call to use articles of American manufacture, [FN208] Congressional power to cut canals, [FN209] and Congressional power to establish an university. [FN210]

The last minute [FN211] discussion of canals is illuminating:

Doc. Franklin moved to add after the words "post roads" Art I. Sect. 8. "a power to provide for cutting canals where deemed necessary"

Mr. Wilson 2nded the motion.]

Mr. Sherman objected. The expense in such cases will fall on the U. States, and the benefit accrue to the places where the canals may be cut.

Mr. Wilson[.] Instead of being an expense to the U.S. they may be made a source of revenue.
Mr. Madison suggested an enlargement of the motion *111 into a power "to grant charters of incorporation where the interest of the U.S might require & the legislative provisions of individual States may be incompetent." His primary object was however to secure an easy communication between the States which the free intercourse now to be opened, seemed to call for. The political obstacles being removed, a removal of the natural ones as far as possible ought to follow. Mr Randolph 2nded the proposition[.]

Mr. King thought the power unnecessary.

Mr. Wilson. It is necessary to prevent a State from obstructing the general welfare.

Mr. King. The States will be prejudiced and divided into parties by it. In Philad. & New York, it will be referred to the establishment of a Bank, which has been a subject of contention in those Cities. In other places it will be referred to mercantile monopolies.

Mr. Wilson mentioned the importance of facilitating by canals, the communication with the Western Settlements. As to Banks he did not think with Mr. King that the power in that point of view would excite the prejudices & parties apprehended. As to mercantile monopolies they are already included in the power to regulate trade.

Col. Mason was for limiting the power to the single case of Canals. He was afraid of monopolies of every sort, which he did not think were by any means already implied by the Constitution as supposed by Mr. Wilson.

The motion being so modified as to admit a distinct question specifying & limited to the case of canals,


The other part fell of course, as including the power rejected. [FN212]

This discussion implies that if the intellectual property *112 clause had been understood to
include exclusive rights in business methods, its passage would not have been so uncontrover-
sial. Additionally, this interchange demonstrates that the colonists had not outgrown the Statute
of Monopolies' joinder of corporations and monopolies. [FN213] The argument that a corporate
charter to provide a public good, such as a bridge, canal, or road, included an implied promise
that the government would not approve a competing entity, survived in the United States until
the Charles River Bridge case in 1837. [FN214]

During the ratification battle, the anti-federalists were concerned about the possibility of gov-
ernment-granted monopolies. Mr. Gerry refused to sign the Constitution; [FN215] the exceptions
he mentioned during the ending sessions of the convention included that "[u]nder the power over
commerce, monopolies may be established." [FN216] The anti-federalist essay *113 series by
Centinal made the same point. "[T]here is no declaration . . . that monopolies in trade or arts, oth-
er than to authors of books or inventors of useful arts, for a reasonable time, ought not to be
suffered." [FN217]

The anti-federalist problem with monopolies did not end in the privacy of the convention. George Mason, who also refused to sign the Constitution, [FN218] went on public record as fear-
ing Congress' possible power to grant monopolies: [FN219] "Under their own construction of the
general clause at the end of the enumerated powers, the Congress may grant monopolies in trade
and commerce . . . ." [FN220] Mason also feared something quite different which he also termed
"monopoly": "[b]y requiring only a majority to make all commercial and navigation laws, the
five southern states . . . will be ruined: for such . . . regulations may be made, as will enable the
merchants of the northern and eastern states . . . to monopolize the purchase of commodities . . . ."
[FN221] The fear that the proposed constitution might allow monopolies was also raised in
print by the Centinal, [FN222] the Federal Farmer, [FN223] Agrippa, [FN224] *114 and A Son
of Liberty. [FN225]

James Iredell's published response to Mason's objections cunningly runs Mason's disparate
"monopoly" objections together:
The first objection mentioned is, "That the Congress may grant monopolies in trade and commerce." Upon examining the constitution I find it expressly provided, "That no preference shall be given to the ports of one State over those of another;" and that "citizens of each State shall be entitled to all the privileges and immunities of citizens in the several States." These provisions appear to me to be calculated for the very purpose Mr. Mason wishes to secure. Can they be consistent with any monopoly in trade and commerce? . . . I should suppose . . . [this objection] arose from a jealousy of the eastern States very well known to be often expressed by some gentlemen of Virginia. They fear, that a majority of the States may establish regulations of commerce which will give great advantage to the carrying trade of America, and be a means of encouraging New England vessels rather than Old England. Be it so. No *115 regulations can give such advantage to New England vessels, which will not be enjoyed by all other American vessels . . . [FN226]

The asterisk designated footnote reads:

One of the powers given to Congress is, "To promote the progress of science and useful arts, by securing for limited times to authors and inventors the exclusive right to their respective writings and discoveries." I am convinced Mr. Mason did not mean to refer to this clause. He is a gentleman of too much taste and knowledge himself to wish to have our government established upon such principles of barbarism as to be able to afford no encouragement to genius. [FN227]

The Anti-Federalists also publicized the way monopolies could be spawned by the desire to actualize other government powers without enlarging the number of paid government officials. [FN228] Brutus, for example, hypothesized that, to collect an excise on cider, the government might grant one man in each area a monopoly on building and keeping cider mills. [FN229]

The Federalist Papers are not helpful. Madison never defined "useful inventions." [FN230] Madison's unhelpful bromide *116 about utility was echoed in various state ratifying conventions, but repetition does not provide clarification. [FN231]

Madison's constitutional amendment suggestions to the first session of the first Congress included neither an anti-monopolies clause [FN235] nor an explanation of its absence. [FN236] On the House floor, Gerry twice introduced an anti-monopoly amendment, but was twice voted down without recorded discussion. [FN237] We know that Madison was not in favor of monopolies on common occupations. [FN238] We also know that at the convention he made two fruitless suggestions that Congress have the power to authorize corporations. [FN239] Perhaps Madison trusted Congress; incorporation then required individualized legislative approval. [FN240]

What I find important is that the objections to trade monopolies did not mention the Intellectual Property Clause. To me, this strongly implies that the eighteenth century *118 American public did not read "useful arts" to include business. I admit that my conclusion is debatable. At the least, however, I have established evidence of a strong contemporaneous concern that government might be over-ready to grant trade monopolies - a concern not held in regard to exclusive rights to inventions in the "useful arts."

So far, the argument in this section supports the dictionary meaning for "useful arts" and the theoretical importance of that choice of words. We need to go one step further.

The Constitution does not include an anti-monopoly clause - even though such a clause was part of the Anti-Federalist program. This omission might mean that the negative implication of the Intellectual Property Clause does not forbid all other legal maneuvers exempted in the Statute
of Monopolies - for example, corporations and grants made individually by the legislature. Certainly, the federal government has been allowed to charter corporations [FN241] and to empower monopolies in regulated industries, such as telecommunications. [FN242] Something however that looks very much like an intellectual property right, but is not for a "useful art" and does not "promote progress," would presumably be unconstitutional as an attempt to bypass a constitutional limit. [FN243]

This analysis leaves Congress the probable power, under the Commerce Clause, to grant rights similar to patents for business methods. It does not, however, allow Congress to delegate power to approve such grants to the USPTO for issuance under regulations tailored to deal with "useful arts," whose improvements theoretically promote the "progress" of *119 such arts. Congress would need to create a distinct system. Congress has not done so. The burden of persuading Congress to do so seems, to my hopeful eyes, quite high. Until someone climbs that mountain, business method patents are unconstitutional. Wonderful!

VI. Conclusion

This paper has made four different arguments for the unconstitutionality of business method patents. Two of these arguments can be bypassed only by amending the Constitution. Two may be overcome by sufficiently targeted congressional action.

(1) Business method patents inherently do not promote progress; they are simply unconstitutional.

(2) Business method patents may not be assumed to promote progress; they are, therefore, unconstitutional unless Congress finds a factual, rational basis for deciding that they do promote progress.

(3) "Useful arts" does not include methods of commerce; business method patents are therefore unconstitutional.

(4) "Useful arts" does not include methods of commerce. The ratifying generation only ap-
proved exclusive rights in trade if Congress made a targeted cost/benefit analysis, perhaps, a separate analysis for each grant. Business method patents are unconstitutional unless Congress legislates each one directly or creates an administrative procedure to authorize such grants separately from progress-enhancing grants in the useful arts.

On the strongest reading, patents on business methods are unconstitutional either as not promoting progress or as not involving the "useful arts." On any reading, they are at least problematic. USPTO patent examination does not do a societal cost/benefit analysis - as an eighteenth century representative legislature would have been expected to do before chartering an innovative corporation, such as a national *120 bank. I see no reason to assume that the ratifying generation believed that any exclusive grant to any non-obvious anything would "promote the progress of . . . the useful arts." [FN244] Unless the constitutional limitation is meaningless, someone needs to consider the real world impact of business method patents. The obvious institution to do so is Congress.

In sum, business method patents are problematical both socially and constitutionally. If the Supreme Court reaches their validity, it should void them either permanently or until Congress actually considers whether such patents "promote the progress of . . . the useful arts."

[FNa1]. Visiting Associate Professor/Visiting Scholar at Northern Illinois University, College of Law. My thanks for helpful comments to Ann Bartow, Rochelle Cooper Dreyfuss, Robert A. Kreiss, Eugene Quinn, Richard H. Stern, Rosemarie Ziedonis, the faculty colloquium of Franklin Pierce Law Center, and the attendees at the Rutgers Symposium, April 12, 2001.

[FN1]. "The Congress shall have Power... [t]o promote the Progress of Science and the useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries...." U.S. Const. Art. I, § 8, cl. 8 (also referred to as the "Intellectual Property Clause"). Based on the parallel construction of the constitutional clause, I agree with those who read exclusive rights in inventions as tied to "useful arts," rather than to "science and
useful arts." Compare, e.g., S. Rep. No. 82-1979, at 1, 3 (1952) reprinted in U.S.C.C.A.N., Vol. 2 2394, 2396 (indicating that "[t]he first patent law and all patent laws up to a much later period were entitled 'Acts to promote the progress of useful arts'") with, e.g., Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 349 (1991) ("The primary objective of copyright is... '[t]o promote the Progress of Science and useful Arts."'); and H.R. Rep. No. 60-2222, at 6-7 (1909) (referring to "art or science" in report accompanying Copyright Act of 1909).


[FN3]. This is the business method followed by the first known vessel to sail from the northeast to China, the famous Empress of China which left New York on February 24, 1784. See e.g., Mary A. Y. Gallagher, Charting a New Course for the China Trade: The Late Eighteenth Century American Model, 57 Am. Neptune 201, 208 (1997). This voyage, partially backed by Robert Morris, was denied coverage by French admiralty insurance firms because of its novelty and risk. See id. at 208.

[FN4]. This is the business method proposed in 1783 by John Ledyard, a Connecticut man who sailed with James Cook. See id. at 206. American businessmen regarded the idea as both unconventional and risky. Id. The method was adopted by the Hope which left Boston in 1790, picked up otter skins on the northwest coast of America and sailed to China. Id. at 212. Furs were the answer to the difficult problem of finding goods saleable in China. See, e.g., Sister Magdalen Coughlin, The Entrance of the Massachusetts Merchant into the Pacific, 48 S. Cal. Q. 327, 339-41 (1966) (discussing this problem and asserting that the New England-Pacific Northwest-China Trade "dominated American commerce for decades" in the eighteenth and nineteenth centuries).

[FN5]. The first American voyage to China involved a large ship and wealthy investors. Using smaller, more easily financed ships, was "radically different." See Gallagher, supranote 3, at 211. Voyages of small ships "defied the then common wisdom that only large vessels could trade
profitably since the Chinese taxed all ships equally, whatever their size." Id.at 212; Paul E. Fontenoy, An "Experimental" Voyage to China 1785-1787, 55 Am. Neptune 289, 294 (1995). "East Indiamen" employed by Britain and Continental Europe were commonly 1,000 tons or more, while the Experiment, the second American vessel to sail directly to China, was only eighty-five tons. See id. at 289.

[FN6]. Such a "bottomry" or "respondentia" loan was first used by the Empress and quickly became common in U.S.-China trade. See, e.g., Gallagher, supra note 3, at 213-14.

[FN7]. The basic requirements for a United States patent are patentable subject matter, novelty, utility, and non-obviousness to a person of ordinary skill in the relevant arts. See, e.g., 1 Peter D. Rosenberg, Patent Law Fundamentals §6:00 at 6-3 (2d ed. 2000).

[FN8]. But see Coughlin, supranote 4, at 336-37 (discussing the possible presence of American traders in the Far East in the late seventeenth and early eighteenth centuries, and the many suggestions in the 1780s for a voyage from New England to China).


[FN11]. "[U]pon the petition of any person... it shall and may be lawful for [any two members of the Patent Board] if they shall deem the invention or discovery to be sufficiently useful and important, to cause Letters Patent to be made out... granting [a patent right]." Patent Act of 1790, § 1; see also Walterscheid, supra note 9, at 71-73 (1998) (interpreting the Patent Act of 1790).

[FN12]. "The Congress shall have Power... To promote the Progress of Science and useful Arts, by securing for limited Times to Authors and Inventors the exclusive Right to their respective Writings and Discoveries" U.S. Const. Art. I, § 8, cl. 8.


See McCulloch v. Maryland, 17 U.S. 316, 423 (1819) (Congress may not "adopt measures which are prohibited by the [C]onstitution" or "pass laws for the accomplishment of objects not intrusted to the government.").


State Street, 149 F.3d at 1370 ("statutory subject matter"); see also AT&T, 172 F.3d at 1353 ("This case asks us once again to examine the scope of section 1 of the Patent Act, 35
U.S.C. §101...."


[FN21]. Id. at 2398-99. "Art," furthermore, was used with different meaning in other parts of the patent statute, thus creating a possibility of confusion. Id.

[FN22]. State Street, 149 F.3d at 1375-76. The Federal Circuit also asserted a lack of case law relying on this alleged exception. Id. But see Joseph E. Seagram & Sons, Inc. v. Marzall, 180 F.2d 26, 28 (D.C. Cir. 1950) (seemingly relying in part on the business method exception to affirm the PTO's refusal to issue a patent on a broadly defined method of testing consumer preferences.).


The Federal Circuit imported this oversight from *Chakrabarty*, 447 U.S. at 309. But see *Farmers' & Merchs' Bank of Monroe v. Fed. Reserve Bank*, 262 U.S. 649, 662-63 (1923) ("The act merely confers authority to do so.... '[M]ay receive' [are] words of authorization merely [and not words of obligation]. It is true that in statutes the word 'may' is sometimes construed as 'shall'. But that is where the context, or the subject matter, compels such construction.").

*State Street*, 149 F.3d at 1371 (reversing District Court's decision that the claim in question recited a process).

"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(b)*. This definition merely expands the issue into the meaning of "process, art or method...." § 100(b).

See, e.g., *Whitman v. Am. Trucking Ass'ns*, 531 U.S. 457, 468 (2001) (searching statute for a "textual commitment of authority" which is "clear"). But see *id. at 490-91* ("I would not rest this conclusion solely upon §109's language or upon a presumption" and considering legislative history.) (Breyer, J., concurring).

The USPTO may also deny a patent if it can demonstrate another defect in the application. Unless the examiner presents arguments and references making a prima facie case of unpatentability, a patent must be issued. If the examiner presents such a prima facie case and the applicant responds, the reviewing tribunal considers the entire record. See, e.g., *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992) (explaining the burden-shifting scheme used in patent examination).

See, e.g., *Feist Publ'ns v. Rural Tel. Serv. Co.*, 499 U.S. 340, 349 (1991) ("The primary objective of copyright is not to reward the labor of authors, but '[t]o promote the Progress of Science and useful Arts." ' (citations omitted)); *Kewanee Oil Co. v. Bicron Corp.*, 416 U.S. 470, 480 (1974) (stating that patent law is constitutionally intended to "have a positive effect on society").
[FN32]. But see Business Method Improvement Act of 2001, H.R. 1332, Section 2 defining a 'business method' to include any "(1) a method (A) of (i) processing data or (ii) performing calculation operations; and (B) which is uniquely designed for or utilized in the practice, administration, or management of an enterprise"; 

"(2) any technique used in athletics, instruction, or personal skills; (3) any computer-assisted implementation of a method described in paragraph (1) or a technique described in paragraph (2)." (as reprinted in 61 BNA Patent Trademark & Copyright J. 552 (April 6, 2001)). A USPTO spokesperson recently explained business method patents as coterminous with class 705, machines and methods for processing calculations and for the "practice, administration, or management of an enterprise, for processing of financial data, and of determination of the charge of goods and services" including four groups: (a) applications for determining potential customers; (b) inventions used to inform customers; (c) methods of exchanging money and credit in transactions; and (d) methods of tracking resources, money, and products. See John J. Love, Business Method Patents, Rich. J.L. & Tech. 8, 9 (2000) at http://www.richmond.edu/jolt/v7i2/love.html (last visited Nov. 15, 2001) (on file with the Rutgers Computer and Technology Law Journal).

[FN33]. Accord Eugene R. Quinn, The Proliferation of Electronic Commerce Patents: Don't Blame the PTO, 28 Rutgers Computer & Tech. L.J. 121__ (2002) (asserting that Priceline.com's patent is invalid because "[t]he invention that allows the Priceline.com business method to work is the InterNet, not any technological advancement of the inventors of the '127 patent.").

[FN34]. See Diehr, 450 U.S. at 215 (Stevens, J. dissenting, joined by Brennan, Marshall & Blackmun, JJ.) (Asserting that "post-solution activity" listed in a claim reciting an algorithm should have no "legal significance because it does not constitute a part of the inventive concept that the applicants claimed to have discovered."). The Diehrdissent was faithful to Parker v. Flook, 437 U.S. 584, 594 (1978) ("[T]he discovery of [a phenomenon of nature or mathematical formula] cannot support a patent unless there is some other inventive concept in its application.").
The issue of whether an invention is a method is to be determined based on its underlying nature and not on the technicality of the form of the claims in the patent. For example, a method for doing or conducting business that has been claimed in a patent as a programmed machine, as in the State Street case, is a method for the purposes of section 273 if the invention could have as easily been claimed as a method. Form should not rule substance.

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


See, e.g., Alan L. Durham, "'Useful Arts' in the Information Age," 1999 BYU L. Rev. 1419, 1423 (1999) (arguing that computer programs should be patentable when the claim "reflect[s] the programmer's art and not, for example, the accountant's art").


(on file with the Rutgers Computer and Technology Law Journal). Part of the problem with gauging non-obviousness is the possibility that some businesses may have been using the method internally and protecting it as a trade secret. The PTO’s difficulty in weeding out obvious claims is, however, outside of the scope of this paper. Many good articles have been published on this topic. See, e.g., Robert P. Merges, As [FN42]. But see Hearing on H.R. 5464 Before the Sub-comm. on Cts., the Internet and Intellectual Prop. of the House Comm. on the Judiciary, 107th Cong. 7 (2001) [hereinafter "April 2001 Hearing"] (statement of Michael Kirk, Executive Director of the American Intellectual Property Law Association) ("[I]t would be all but impossible to precisely determine which inventions are and which are not 'business method inventions.' ").


[FN44]. Id. As the State Street court mentioned, the PTO’s 1996 examination guidelines for computer related inventions instructed that claims should not be categorized as business methods, but merely as processes. **149 F.3d at 1377** (quoting Manual of Patent Examining Procedures § 706.03(a) (1994)).


[FN46]. Id. at 2.

[FN47]. See id. at 2. From 1793 through 1836, the United States had a registration system; patents were not examined for non-obviousness. I, therefore, discount the importance of patents issued during this period, with the exception of ones which withstood court challenge on invalidity grounds. Compare Patent Act of 1793, reprinted in Walterscheid, supra note [ ], at 479-86 with Patent Act of 1836, reprinted in id.


[FN51]. Id.

[FN52]. See, e.g, In re Gulack, 703 F.2d 1381, 1385 (Fed. Cir. 1983) (requiring "printed matter" to be "functionally related to the substrate" on which the matter is printed to "be entitled to patentable weight"). But see In re Lowry, 32 F.3d 1579, 1583 (Fed. Cir. 1994) (warning that "a printed matter rejection [under 35 U.S.C. § 103] stands on questionable legal and logical footing" and asserting that the "printed matter" doctrine does not reach computer configurations) (quoting in part In re Gulack, 703 F.2d at 1385 n.8).

[FN53]. See 35 U.S.C. §271(d)(4) (1994) ("No patent owner otherwise entitled to relief for infringement or contributory infringement of a patent shall be denied relief... by reason of his having... (4) refused to license or use any rights to the patent.") (added by Patent and Trademark Authorization Act, Nov. 19, 1988). Compare, e.g., Cont'l Paper Bag Co. v. E. Paper Bag Co., 210 U.S. 405, 422-30 (1908) (holding that infringement should be enjoined even though patentee is neither licensing nor working claimed invention) with Special Equip. Co. v. Coe, 324 U.S. 370, 380-84 (Douglas, J., dissenting) (calling for judicial ending of judicially created right to enforce unpracticed patents as violative of the constitutional requirement to create only inventors' rights which promote progress).

[FN54]. See, e.g, James R. Gibson, Otter Skins, Boston Ships, and China Goods: The Maritime Fur Trade of the Northwest Coast, 1785-1841, 311-15 (1992) (tables showing growth of triangular trade which would have been covered by hypothetical claim 2); Alfred Tamarin & Shirley
Glubok, Voyaging to Cathay: Americans in the China Trade at unnumbered preface (1976) ("[T]he American China trade was invaluable to the survival and growth of the new United States.").


[FN58]. A long-ago presidential commission recommended against allowing patents on computer programs. See Report of the President's Commission on the Patent System, "To Promote the Progress of... Useful Arts" in an Age of Exploding Technology 12-13 (1966), relied on Diamond, 450 U.S. at 218 n.45 (Stevens, J. dissenting).


146 Cong. Rec. E1659-60 (daily ed. Oct. 3, 2000) (statement of Rep. Berman) (introducing The Business Method Patent Improvement Act of 2000). The appropriate House subcommittee held a short oversight hearing on business method patents on April 4, 2001. See generally April 2001 Hearings, supranote 40. Most speakers merely assumed that since patents were good, business method patents were good. Id. At most, speakers suggested a few procedural corrections and better USPTO funding. See id. (written remarks of Howard Coble, Chairman; Rep. John Conyers; Nicholas P. Godici, Acting Under Secretary of Comm. for Intell. Prop. & Acting Dirt. Of the USPTO; Michael K. Kirk, Exec. Dir. Am. Intell. Prop. L. Ass'n; Ronald E. Myrick, Pres. Intell. Prop. Owners Ass'n). The sole opposer was Andrew B. Steinberg, Exec. V. P. and Gen. Counsel of Travelocity.com who insisted that "the proliferation of these [business method] patents represents a serious threat to the growth of electronic commerce." April 2001 Hearings, supranote 38, Steinberg statement at 1. Steinberg, from his personal business experience, testified that the first mover advantage was sufficient incentive for business method innovations. His illustration was the rapid expansion of internet direct auctions as contrasted to the lack of innovation or competition in reverse auctions. Steinberg blamed the lack of innovation on fear of Priceline.com's patent - a patent Steinberg believed to be invalid. Id. at 3-5. Hon. Howard Berman, the Subcommittee's ranking minority member, also discussed the problem of quality patent examination, indicating that the three bills he and Rep. Boucher had just introduced were merely a "starting point" in the legislation required. Berman was the only speaker who alluded to the possibility that the "Useful Arts" mentioned in the Intellectual Property Clause of the Constitution might not include inventions lacking any "technological aspect." Additionally, Berman mentioned the extremely disparate views expressed even within single industries as to the economic affect of such patents. Id. available at http://www.house.gov/judiciary/berman_040401.htm (last visited Nov. 17, 2001) (on file with the Rutgers Computer and Technology Law Journal).

While many celebrate or accept business method patents, see, e.g., John J. Love, Business Method Patents, 7 Rich. J.L. & Tech. 2, 12 (2000), at ht-

business method patents, the U.K. Patent Office concluded that it had found no sign of want of innovation in the field, that no want of innovation had existed in the U.S. before State Street, and that ways of doing business would remain unpatentable until someone made a showing that such patents "would be likely to increase innovation." Id. PP22-24. But see Larry A. DiMatteo, The New "Problem" of Business Method Patents: The Convergence of National Patent Laws and International Internet Transactions, 28 Rutgers Computer & Tech. L.J. 1 (2002) (arguing that while EU nations deny the availability of business method patents, their practice is more flexible).

[FN64]. Furthermore, one major scholar sees no limits to the Intellectual Property Clause. Robert P. Merges, As Many As Six Impossible Patents Before Breakfast: Property Rights for Business Concepts and Patent System Reform, 14 Berkeley Tech. L. J. 577, 587 (1999) ("Given a constitutional provision rooted in a blind faith in 'progress,' we cannot read in historically contingent limitations on patentable subject matter") (citations omitted). However, Merges fails to cite or discuss literature arguing the contrary position.

[FN65]. See, e.g., supranotes 16-18, for cases that focus on statutory construction.


[FN68]. See also, Traffix Devices, Inc. v. Marketing Displays, Inc., 532 U.S. 23, 121 S. Ct. 1255, 1263 (2001) (mentioning choice not to reach constitutional issue, seemingly to warn federal courts to dampen their over protective fever or face constitutional medicine). The Court has recently also demonstrated a willingness to reign in Congress. See, e.g., Board of Trustees of the Univ. of Ala. v. Garrett, 531 U.S. 356, 368-74 (2001) (scrutinizing closely the factual record made by Congress and holding that the record is insufficient to allow abrogation of state sovereign immunity); United States v. Morrison, 529 U.S. 598, 627 (2000) (holding that Congress lacked the power to enact the Violence Against Women Act under either the Commerce Clause or the Fourteenth Amendment); United States v. Lopez, 514 U.S. 549, 567-68 (1995) (holding


[FN71] 31 James 1, ch. 3, §§V, VI (1623).

[FN72] See Edgeberry v. Stephens, 2 Salk. 447, 1 Abbott's P.C. 8 (K.B. 1691). See also, e.g., Richard Godson, A Practical Treatise on the Law of Patents for Inventions and Copyright 98-99 (London, Joseph Butterworth & Son 1823); William Hands, The Law and Practice of Patents for Inventions 5 (London, W. Clarke & Sons 1808) ("[A] foreign article is considered as a new manufacture, upon its first introduction here, although it may have been old abroad," discussing law of Great Britain) (emphasis in original); Walterscheid, supranote 9, at 95 & n.41 (asserting importation patents remained good in Great Britain throughout the nineteenth century).


[FN74] See H.R. 41 (Feb. 16, 1790), reprinted in Walterscheid, supranote 9, at 448, 452. The definition of invention in Section 3 was "not before used or known in the [United] States." Section 6 requires that first importers be treated as inventors).

[FN75] According to Representative Thomas Fitzsimmons letter to manufacturing spokesperson Tench Coxe. See Walterscheid, supranote 9, at 126 (reproducing excerpt); see also id. at 127-28
(discussing Madison's unclear statement of constitutional concerns).


[FN78]. See Livingston v. Van Ingen, 9 Johns. 507 (N.Y. 1812) (stating that the states, however, had this power); see also Gibbons v. Ogden, 22 U.S. 1, 50. "But the patent laws of the United States merely extend to inventions actually made in the United States, and not to any imported invention. The whole extent of the sovereign power exercised by the British Parliament, on this subject was vested in the Legislature of New-York. A part only was given to [C]ongress, and all the residue remains in the [S]tate exclusively." Id. at 50. (argument of respondent's attorney, referring to Livingston). The Supreme Court's opinion in Gibbons did not reach the Intellectual Property Clause. Early cases by Justice Washington on circuit declare importation insufficient to support a patent, but Washington seems to consider this limit statutory, not constitutional. See Evans v. Eaton, 8 F. Cas. 846, 852-3 (C.C.W.D. Pa. 1816) (No. 4,559) (relying on statute, "The intention of Congress is very obvious, from the language of this law.")., rev'd on other grounds, 16 U.S. (3 Wheat.) 454 (1818); Reutgen v. Kanowrs, 20 F. Cas. 555, 556 (No. 11,710) (C.C.W.D. Pa. 1804) (jury charge; authority for limit unclear); Dawson v. Follen, 7 F. Cas. 216 (C.C.W.D. Pa. 1808) (No. 3670) (authority for limit unclear).

[FN79]. Roebuck and Garbett v. William Stirling & Son (House of Lords, 27 May 1774), reprinted in 1Thomas Webster, Reports and Notes of Cases on Letters Patent for Inventions 45 (London, Thomas Blenkarn 1844) [hereinafter Webster, Reports and Notes].

[FN80]. Id. The court made no negative comment about process patents. Id. While the patent was held invalid, that was the standard outcome in British patent litigation at the
time. Id. "Many cases upon patents have arisen within our memory, most of which have been decided against the patentees, upon the ground of their not having made a full and fair discovery of their inventions." Turner v. Winter (1787), reprinted in Webster, Reports and Notes, supra note 79, at 77, 81.

[FN81]. Webster, Reports and Notes, supra note 79, at 77.

[FN82]. See Turner v. Winter (1787), reprinted in Webster, Reports and Notes, supra note 86, at 77. The ordered new trial gave judgment for the patent holder. See id. at unnumbered note p. 82.

[FN83]. Gibson and Campbell v. Brand (Common Pleas 1842), reprinted in Webster, Reports and Notes, supranote 79, at 631-33 (citing Boulton & Watt v. Bull, 2 H. Bl. 468 (1795)).

[FN84]. Hands, supranote 72, at 6-7 (emphasis in original). Hands explains further that a patent written to cover a method of making a substance would be upheld as a patent on the vendable substance made by that method. Some "mere method" patents, however, were "not good. [Because t]he subject of every grant must be certain [and] a mere method is uncertain." Id. at 4.


[FN86]. See id; see also Godson, supranote 72, at 78-98 (agreeing with Coryton).


[FN89]. See S. Rep. No. 82-1979, at (1952) reprinted in U.S.C.C.A.N. 2394, 2398 (explaining that the only change in the wording of § 101 is the replacement of "art" by "process"; which results in no substantive change because "art" has been "interpreted by the courts to be practically synonymous with process or method.").


[FN92]. Webster, First American Dictionary, supranote 91, unnumbered page headed "ARR - ARS - ART." Webster's third definition of "art" is "skill, dexterity, or the power of performing certain actions...." Id.at unnumbered page headed "ART ART ART." The phrase "useful arts" is not defined in either Noah Webster's first American dictionary or Samuel Johnson's classic reference work. Webster could have illustrated the standard dichotomy between the useful and the liberal arts from the papers of George Washington. SeeLetter from George Washington to Christopher Colles (Jan. 25, 1783), reprinted in 26 The Writings of George Washington from the Original Manuscripts Sources, 1745-1799 (John C. Fitzpatrick, ed.)[hereinafter Writings of George Washington] (declining to support a major project to make the Ohio River more navigable and suggesting more practicable projects "in attempting which you will doubtless experience the encouragement and Patronage of all who are friendly to the liberal and useful Arts as well as the interests of society and their Country."), available at http://memory.loc.gov (last visited May 3, 2001) (on file with the Rutgers Computer and Technology Law Journal).

[FN93]. A "manufacturer" or "mechanic" was someone who worked with his hands. See Susie I. Tucker, Protean Shape: A Study in Eighteenth-Century Vocabulary and Usage 263 (1967).

[FN95]. Id. at 494-96. See also Letter from George Washington to the Marquis De Lafayette (Jan. 29, 1798), reprinted in The Writings of George Washington, supra note 92, at 184, 186 ("While our commerce has been considerably curtailed for want of that extensive credit formerly given in Europe, and for default of remittance; the useful arts have been almost imperceptibly pushed to a considerable degree of perfection.").

[FN96]. Coulter, supra note 94, at 498; see also Robert A. Kreiss, Patent Protection for Computer Programs and Mathematical Algorithms: The Constitutional Limitations on Patentable Subject Matter, 29 N.M. L. Rev. 31, 62, 64-66 (1998) (arguing that patents may constitutionally be granted only to inventions within the "useful arts" which he equates with the "technological arts").


[FN99]. See Thomas, supranote 97, at 51 (citation omitted).

[FN100]. Id. at 51, 53-55.

[FN101]. 3 James, c.3 (1623) (Eng.).

[FN102]. See, e.g., Godson, supranote 72, at 81. Eminent American patent historian Edward C. Walterscheid believes the eighteenth century American meaning of "useful arts" to be "manufactures," relying largely on Alexander Hamilton's report on manufactures and papers of the Philadelphia Society for the Encouragement of Manufactures and the Useful Arts. See Walterscheid,
supranote 9, at 51-52. While I have reached a relatively similar conclusion, I cannot concur that Walterscheid's authorities are the best support. Both sources repeatedly invoke a trilogy of segments combining to form the then-current American economy: agriculture, manufacturing, and commerce. See Announcements concerning the Pennsylvania Society for Encouragement of Manufactures and the Useful Arts, 2 The American Museum, or Repository of Ancient and Modern Fugitive Pieces at 167; Alexander Hamilton, Report on the Subject of Manufactures (final version), in 10 The Papers of Alexander Hamilton 256, 276, 303 (Harold C. Syrett, ed. 1966). Hamilton also once mentions "Agriculture Arts manufactures and Commerce" and once "Arts, Agriculture, Manufactures and Commerce." Id. at 304, 338 (emphasis in original). If the term "useful arts" is limited to "manufactures," we would need to exclude both commerce and agriculture. We could consider implements used in agriculture and mechanical processes performed on agricultural products to be "manufactures," as Hamilton does. See Id. We would still need, however, to exclude from "useful arts" processes performed on agricultural land and, possibly, living material. While perhaps correct, I am not yet prepared to reach this conclusion in light of the current overlap between manufacturing and genetic manipulation. See Diamond v. Chakrabarty, 447 U.S. 303, 308-310 (1980) (holding that man made micro-organism is patentable subject matter, construing the issue narrowly, as one of statutory construction). Compare Letter from George Washington to Edward Newenham (Mar. 2, 1789), in The Writings of George Washington from the Original Manuscript Sources (John C. Fitpatrick ed.) http://memory.loc.gov (last visited Mar. 3, 2001) ("[T]his country is susceptible of various and great improvements in its agriculture. It is on that resource it must depend essentially for its prosperity. The useful arts and commerce ought not, however, to be altogether neglected."); implying that agriculture is not a 'useful art') (emphasis in original) with 1 The Diaries of George Washington, at 349 (Donald Jackson ed. 1976) (listing in bibliography "Arthur Young ed. Annals of Agriculture and Other Useful Arts, 46 vols. London: various publishers, 1784-1815" and implying that agriculture is among the 'useful arts') available at http://memory.loc.gov (last visited May 3, 2001). The three-part division echoed in Commerce Clause jurisprudence from United States v. E. C. Knight Co ...
156 U.S. 1 (1895), through Carter v. Carter Coal Co., 298 U.S. 238 (1936), under which the "commerce" regulable by Congress did not include production of goods by either manufacture or agriculture. See, e.g., Randy E. Barnett, The Original Meaning of the Commerce Clause, 68 U. Chi. L. Rev. 101, 129 (2001) (reviewing commerce clause jurisprudence and arguing that the original constitutional meaning of "commerce" is limited to the trade and exchange of goods).


[FN104]. Relatedly, "mere merchants" were large traders who had no hand in manufacturing the goods they sold. "Mere merchants" attempted to prevent all others from entering the monopolistic chartered companies which the British crown used to organize foreign trade from at least the reign of Elizabeth I. See, e.g., Robert Ashton, The City and the Court 1603-1643, at 11-16 (Cambridge Univ. Press 1979); George Unwin, The Merchant Adventurers' Company in the Reign of Elizabeth, in Studies in Economic History 133, 172-75, 181-86, 196 (ed. R. H. Tawney 1927).

[FN105]. See generally Pollack, Purveyance and Power, supra note 13 (discussing issue at length).

[FN106]. 3 James 1, c.3 (1623) (Eng.).

[FN107]. See Cowell, supranote 13 (broad definition of "monopoly").


[FN109]. 3 James 1, §§7, 9.

[FN110]. See, e.g., Cowell, supra note 13 (defining "patent"); Christine MacLeod, Inventing the
Industrial Revolution: The English Patent System, 1660-1800, at 1, 2 (1988) (explaining that, until creation of English Patent Office in the mid-nineteenth century, patents of invention were filed with many other types of "patents" including those for land, titles, offices, and other privileges).

[FN111]. See MacLeod, supranote 110, at 1.


[FN116]. See, e.g., 4 Samuel R. Gardiner, History of England from the Accession of James I to

[FN117]. See 7 Commons Debates 1621, at 562-64 (Wallace Notestein et al., eds. 1935) (listing items as voted as grievances by Parliament).


[FN119]. See, e.g., 1 Stephen Dowell, A History of Taxation and Taxes in England from Earliest Times to the Present Day 209 (Augustus M. Kelley 3d ed. 1965); Charles R. Mayes, The Sale of Peerages in Early Stuart England, 29 J. of Mod. Hist. 21 (1957); Lawrence Stone, The Inflation of Honours 1558-1641, 14 Past and Present 45 (1958). Additionally, product inspectors were created in several industries, including textiles, leather, and plumbers' supplies. See, e.g., William Hyde Price, The English Patents of Monopoly 9 (Harvard Univ. Press 1913) (discussing patent for inspecting cordage); George Unwin, The Guilds and Companies of London 256-57 (2d ed. 1925) (discussing inspection patents on types of cloth, wool, and leather); George Unwin, Industrial Organization in the Sixteenth and Seventeenth Centuries 144 (Clarendon Press 1904) (discussing patents for inspection of materials used by plumbers and glaziers). Some became abuses; for example, the Duke of Lenox freely rented his textile inspection stamp without requiring any inspection. See Ashton, supra note 104, at 117-18.

[FN120]. See Rhys Jenkins, The Protection of Inventions During the Commonwealth and Protectorate, 7 Notes and Queries, at 162-63 (11th ser., 1913).

[FN121]. See id. at 162 ("[An i]nstrument for double and multiple writing.")

[FN122]. See id. at 163 (noting that the petitioner claimed discovery of a process for "charking" coals so that it would "become very useful to burn, without yielding that noisome smoke, which so much offends the air of this city.").

[FN123]. See, e.g., A. A. Gomme, Patents of Invention: Origin and Growth of the Patent System
in Britain 16-25 (1946) (discussing paperwork involved in filing a patent application).


[FN125] See MacLeod, supranote 110, at 40-57 (describing patent procedure from 1660-1800).

[FN126] Presumably these lottery patents merely authorized specific lotteries. Lotteries are ancient. See, e.g., 16 Leviticus 8 (Aaron commanded to cast lots to decide which of two goats should be sacrificed); 26 Numbers 55 (Moses used lots to divide land west of the Jordan among the Israelites). The first recorded English lottery was held by Queen Elizabeth I to raise funds for harbor improvements. See C.L'Estrange Ewen, Lotteries and Sweepstakes 29, 34- 63 (1932). It failed; despite numerous royal proclamations, less than 34,000 tickets were sold at 10 shillings each. See id. at 63. In 1612, the British Crown granted "letters patents" allowing the sponsors of the Virginia Colony to hold fund-raising lotteries. See id. at 70-71. In December 1790, the State of Virginia authorized a lottery to help fund the Transylvania Seminary; the Continental Congress authorized one to help support the Revolutionary Army. See James C. Klotter, Two Centuries of the Lottery in Kentucky, 87 Register of the Kentucky Historical Soc'y 405, 406 (1989).

[FN127] See Ewen, supra note 126, at 82 (discussing patents covering banking, lotteries, and insurance), see also Specification of Patent No. 1197 (1778) issued to John Knox for "Plan for Insuring Lives." In contrast, two insurance companies' charters were approved by statute in 1720. See 6 Geo., c. 18, §§1-17 (1719) (Eng.).

[FN128] See MacLeod, supranote 110, at 25 (concerning examination of the quality of dyed silk).
[FN129]. See id. at 35 (noting that one patent grants "the sole printing... of the name and title of his majesty, his heirs and successors, and also of his royal consort the queen, with the imperial arms and badges") (quoting Patents 128 (1661), 137 (1663); P.R.O. PC2.55, p. 240, SP29.91 no. 93); see also MacLeod, supra note 110, at 71 (noting that another patent grants an exclusive right to print Milton's works). Printing patents were another exception to the Statute of Monopolies. See 21 Jam., c. 3, § 10 (1623) (Eng.).

[FN130]. See MacLeod, supra note 110, at 20-38.

[FN131]. See id. at 84-93, 100-04, 109-10, 152-55.


[FN134]. See, e.g., Peter M. Garber, Famous First Bubbles, 4 J. of Econ. Persp. 35-42 (1990) (explained the complex financial scheme on the English national debt involved in the South Sea Bubble of 1720, and its methodological relationship to the slightly earlier scheme by John Law using the French national debt, commonly called the Mississippi Bubble); Harris, supra note 139, at 625 (despite burst of the South Sea Bubble, the refinancing scheme worked).

[FN135]. Ann M. Carlos & Stephen Nichols, Agency Problems in Early Chartered Companies:

[FN136]. See, e.g., id.at 853-75 (discussing organizational strategies used by the Hudson's Bay Company to limit agency failure despite very long distance control).

[FN137]. See MacLeod, supranote 110, at 99-100.


[FN139]. Id. at 256-67. Another example, the Dean Forest ironworks, had operated since 1613, but were efficient only during the tenure of Major John Wade, a particularly "perceptive manager," who ran the operation from 1653 through 1660. Seemingly, neither Major Wade nor his employers attempted to patent Wade's managerial insights. See G. Hammersley, The State and the English Iron Industry in the Sixteenth and Seventeenth Centuries, in Trade, Government and Economy in Pre-Industrial England, supranote 113, at 166, 173, 175-78.

[FN140]. See MacLeod, supranote 110, at 85-86.

[FN141]. See id. at 98. This use of copyright was borrowed from France, but the then-current English patent system allowed grants to the importers of foreign technology. Id.at 246 n.8 (French practice); Hulme, On the History of Patent Law in the Seventeenth and Eighteenth Centuries, supra note 113, at 280-81 (indicating that the primary focus of early patents was on imported technology).

[FN142]. MacLeod, supra note 110, at 86-87 (noting that Jackson's life jacket consisted of metal cylinders).

[FN143]. Id.at 88-89, 155.
"Rural production in Western Europe by the seventeenth and eighteenth centuries encapsulated a vast variety of organizational forms." Pat Hudson, From Manner to Mill: The West Riding in Transition, in Manufacture in Town and Country Before the Factory 124, 124 (Maxine Berg, et al. eds., 1983); see also id. at 124-44 (discussing great variety of organizational forms in textile production in the West Riding area of Yorkshire, England, including the "company mill" - a form of industrial organization apparently used by English textile producers only in Yorkshire).


Samuel Oldknow, textile magnate of the late 1700s in rural England, was known for training his factory managers so well that many became prosperous manufacturers. See George Unwin, Samuel Oldknow and the Arkwrights: The Industrial Revolution at Stockport and Marple 126 (2d ed. 1968) [hereinafter Unwin, Samuel Oldknow].

Jurgen Schlumbohm, Relations of Production - Productive Forces - Crises in Proto-Industrialization, in Industrialization before Industrialization: Rural Industry in the Genesis of Capitalism 94, 105-12 (Peter Kriedte, et al. eds, Beate Schempp, trans., Cambridge Univ. Press 1981). Oldknow solved the problem of paying factory hands despite the continual shortages of small coins (a) by using "shop notes" which he arranged to have accepted by local tradesmen, and, (b) by supplying most of workers' needs in kind, then deducting charges from unpaid wages. See Unwin, Samuel Oldknow, supranote 146, at 176-82.


See, e.g., MacLeod, supranote 110, at 97-114 (discussing inventions without patent applications).
See, e.g., H. I. Dutton, The Patent System and Inventive Activity During the Industrial Revolution, 1750-1852, at 70-75 (1984) (discussing dearth of early cases); MacLeod, supra note 110, at 58-74 (discussing the cases).

John Adams, Intellectual Property Cases in Lord Mansfield's Court Notebooks, 18 J. of Legal Hist. 18, 18-21 (1986) (noting discovery in 1967 of fifty-seven court notebooks written by Mansfield, in which he noted the evidence in a variety of cases tried by him between 1757 and 1786, and briefly describing previously unknown cases involving patents on an addition to a stocking frame for working on ship rigging, stucco, sheets of glass for prints, quick release stirrups, coach springs, a combined piano-harpsichord, an attachment for a stocking frame, a spinning jenny, a box attached to candle-snuffing scissors to catch the falling wick, and a machine for splitting hides.).

The closest was Hamblin's attempt to use Patent No. 517 as permission to build light houses in competition with Trinity House. The Privy Council voided the patent on the ground that Hamblin was overreaching. His patent was issued solely on a method of distinguishing between lights. See, Hulme, Privy Council Law and Practice, supranote 113, at 188-89.

Dutton, supra note 150, at 75.

See, e.g., 8 Gardiner, supranote 116, at 71.

Id.


"Patents of invention" were granted individually by acts of colonial or state governments. Bugbee, supra note 156, at 92-93. South Carolina, passed a patent statute during the Articles of Confederation government, but did not change its practice of passing private legislative
acts. Id.

[FN158]. Massachusetts in March 1644 granted seven adventurers a twenty year monopoly within the province. Id. at 61.

[FN159]. Id. at 58. Besides the import ban, the Virginia House of Burgesses in 1661 reserved a quantity of tobacco to reward Scarborough when he had completed making 800 bushels of salt. Id. He was also given a loan. Id.

[FN160]. Massachusetts granted both a ten year monopoly and a ten year tax exemption to the "Undertakers of Iron Works in New England." Id. at 61-62.

[FN161]. Id. at 62.

[FN162]. In 1652, Virginia issued George Fletcher the fourteen year exclusive right "to distill and brew in wooden vessels which none have experience in but himself." Id. at 58.

[FN163]. Id. at 60-76.

[FN164]. Id. at 76-101.

[FN165]. Id. at 58.

[FN166]. Id. at 67.

[FN167]. Id. at 70-71. New Hampshire issued a patent on a new chimney design in December of 1791, after enactment of the United States' Patent Act of 1790. Id. at 101.

charters issued by the Commonwealth of Massachusetts between 1774 and 1815, when each needed separate legislative approval; besides allowing the right to take tolls, some gave power of eminent domain); Louis Hartz, Economic Policy and Democratic Thought: Pennsylvania, 1776-1860, 38, 39, 46-47, 51-52, 70 (Harvard Univ. Press 1948) (asserting that 64.17% of corporate charters for business purposes issued by special act in Pennsylvania between 1790 and 1860 were for transportation; creation of a business corporation required a special act of the legislature until 1874; obtaining a charter for a state bank usually required agreeing to help finance a transportation corporation; the state built free transportation facilities, but private corporations built toll roads; many transportation corporations were given the right of eminent domain).


[FN171] Id. at 152. See also Richard B. Morris, Government and Labor in Early America 136-66 (1965) (discussing scant success of craft guilds in American colonies).


An important characteristic of the American people from the period of first settlement has been their motivation and responsiveness to economic opportunities. This has resulted not only in a greater degree of labor and capital mobility than existed in Europe, but also a willingness to accept changes in economic organization....


[FN174]. Additionally, the northeast settlers had a higher proportion of families, hence women and children who could process raw goods during slack farming periods and produce home manufactured goods, at least some of which could be sold. See Daniel Vickers, The Northern Colonies: Economy and Society, 1600-1775, in 1 The Cambridge Economic History of the United States, supra note 173, at 209, 212; see also McCusker & Menard, supranote 172, at 309-30 (discussing possibility of putting-out cottage industry in colonies). The complexity of New England trade, however, should not be overestimated. Most ships followed well-established routes between a limited number of ports. Walton & Sheperd, supranote 172, at 90-94.

[FN175]. See Vickers, supra note 174, at 232-35, 248; see also McCusker & Menard, supranote 172, at 189-206 (discussing the innovativeness of merchants in the middle colonies and the linkages between over seas shipping and growth of inland manufacturing and commerce); id.at 289-94 (North American entrepreneurs responsible for initiation and growth of trade with West Indies).


small quantities of many items, wit and imagination were necessary for success. Id. at 54.


[FN181]. Nash, supranote 179, at 150.

[FN182]. See East, supra note 180, at 37-40, 252-62.

[FN183]. Id. at 285-315. Land speculation was related to war debt as many state governments used land in their financing efforts. See Thomas M. Doerflinger, A Vigorous Spirit of Enterprise: Merchants and Economic Developments in Revolutionary Philadelphia 284 (1986). Slightly later, President Washington's payment of the depreciated war bonds at full face value provided large capital for new enterprises. Id. at 286.

[FN184]. McCusker & Menard, supranote 173, at 364 & n.25.

[FN185]. See, e.g., Godson, supranote 72, at 75-78; Hands, supranote 72, at 4.


[FN188]. The USPTO's longer study, furthermore, has not located anything meeting my definition of a business method patent. See White Paper, supra note 42, and accompanying text.
This request prompted Mr. Tucker to "express[] a doubt whether the Legislature has power, by the Constitution, to go further in rewarding the inventors of useful machines, or discoveries in sciences, than merely to secure to them for a time the right of making, publishing and vending them." 1 Annals of Cong. 180 (Joseph Gales ed., 1789), available at http://memory.loc.gov (last visited Sept. 19, 2001) (on file with the Rutgers Computer and Technology Law Journal); see H.R. 123, 1st Cong. (1791), reprinted in IV Documentary History of the First Federal Congress of the United States of America at 530-531 (Charlene Bangs Bickford & Helen E. Veit eds., 1986) (Committee Report stating that the request "involves an enquiry into the Constitutional powers of Congress"); see also Walterscheid, supranote 9, at 77-79 (discussing the congressional debates on the petition for a voyage to Baffin's Bay and the power of the Intellectual Property Clause); David P. Currie, The Constitution in Congress: Substantive Issues in the First Congress, 1789-1791, 61 U. Chi. L. Rev. 775, 799 (1994) (discussing the Congressional debates on the petition and the source of authority for further funding of inventors).

See Walterscheid, supranote 9, at 81-87.

See Walterscheid, supranote 9, at 107-08.

For a copy of Francis Bailey's petition on making type which could produce documents safe from counterfeiting, see Proceedings in Congress, supranote 73, at 353. The House passed a bill to grant Bailey's petition, but it died in the Senate. See id. at 353-56; Walterscheid, supranote 9, at 115-20, 441-43.

See Walterscheid, supranote 9, at 115-16.

Patent Act of 1790 §1, reprinted in Walterscheid, supranote 9, at 463.

See Walterscheid, supra note 9, at 173-74.

See id. at 173 (citing P.J. Federico, Operation of the Patent Act of 1790, J. Pat. & Trademark Off. Soc'y 237, 244 (1936)).
[FN197]. See id. at 173-78.

[FN198]. See id. at 157-63.


[FN200]. Id. at 477 (suggestions from Madison).

[FN201]. Id. at 478 (referring to suggestions from Pinkney). Gerry also moved for clauses on public securities and stages on post roads. See id. at 480.

[FN202]. Id. at 569.

[FN203]. Id. at 580.

[FN204]. Id. at 581. "Nem: con:" is an abbreviation meaning "no one contradicting." Webster's Third New International Dictionary of the English Language 1515 (3d ed. 1966).

[FN205]. See Madison, supra note 199, at 616.

[FN206]. Id. at 620.

[FN207]. Id. at 630.

[FN208]. Id. at 632. The convention agreed to set up a committee to report on this issue, but the committee seems never to have issued any report. Id. at 632 & n. 41.

[FN209]. Id. at 638-39.

[FN210]. Id. at 639. This was voted down after, but not necessarily because, Gov. Morris stated that the power was included in the exclusive power over the seat of government. Id.

[FN211]. The excerpt is from the discussion in convention on Friday, Sept. 14th. The convention closed Sept. 17th. Id. at 634.

[FN212]. Id. at 638-39.
The same tie between corporations and monopolies is reflected in the letters by the anti-federalist essayist Agrippa. Agrippa printed several letters mentioning, among other problems with the constitution, Congress' seeming power to create monopolies. But when he wrote a list of corrections required to the proposed constitution, Agrippa did not mention the word "monopolies"; instead he asked for a clause stating that "Congress shall not incorporate any trading companies..." 16 Letter from Agrippa to the Massachusetts Convention (Feb. 5 1788), reprinted in 4 The Complete Anti-Federalist 109, 112 (Herbert J. Strong ed., Univ. of Chicago Press 1981).

Compare Proprietors of the Charles River Bridge v. Proprietors of the Warren Bridge, 36 U.S. (11 Pet.) 420, 546 (1837) (holding that exclusivity exists only if expressly granted) with, e.g., Dartmouth College v. Woodward, 17 U.S. (4 Wheat.) 518, 657-658 (1819) (Washington, J., concurring) (relying on Blackstone for proposition that corporate charter granted by government includes implied promise not to grant another identical franchise which would prejudice the grant); Pelatiah Webster, An Essay on Credit in which the Doctrine of Banks is Considered and Some Remarks Are Made on the Present State of the Bank of North America (Feb. 10, 1786), reprinted in Pelatiah Webster, Political Essays on the Nature and Operation of Money, Public Finances and Other Subjects Published During the American War and Continued Up To The Present Year, 1791, at 427, 656-63 (Burt Franklin 1969) (arguing that State of Pennsylvania has no right to end or dilute privileges granted in the Bank's charter).

History”); Letter from Jefferson to Uriah Forest (Dec. 31, [1787]), reprinted in 14 Kaminski's Documentary History 488, 489.


[FN218] See Madison, supra note 199, at 659.


[FN221] Id., at 331.


[FN224] See 9 Letter from Agrippa to the People, reprinted in 4 Complete Anti-Federalist, supranote 213, at 85, 86; 10 Letter from Agrippa to the People, reprinted in 4 Complete Anti-Federalist, supranote 213, at 87, 89; ___ Letter from Agrippa to the Massachusetts Convention (Jan. 14, 1788), reprinted in 4 Complete Anti-Federalist, supranote 213, at 94, 97; 14 Letter from Agrippa to the Massachusetts Convention (Jan. 25, 1788), reprinted in 4 Complete Anti-Federalist, supranote 213, at 104-05 (Jan. 29, 1788), reprinted in 4 Complete Anti-Federalist, supranote 213, 105. Agrippa was James Winthrop of Massachusetts. See Levy, supranote 223, at
30.

[FN225]. See Objections by A Son of Liberty, N.Y.J., Nov. 8, 1787, reprinted in 6 Complete Anti-Federalist, supranote 213, at 34, 35. A Son of Liberty was Patrick Henry of Virginia. See Levy, supranote 223, at 174.

[FN226]. James Iredell, Answers to Mr. Mason's Objections to the New Constitution, Recommended by the Late Convention, reprinted in Pamphlets on the Constitution, supranote 220, at 333, 357-58 (internal citation indicated by asterisk).

[FN227]. Id. at 357 at n.*.


[FN229]. Id. at 110, 113. A tax on cider led to the downfall of Lord Bute as Prime Minister of England. See id. at 177 n.4 (note by editors).

[FN230]. Madison commented that:

The utility of this power will scarcely be questioned. The copyright of authors has been solemnly adjudged, in Great Britain, to be a right of common law. The right to useful inventions seems with equal reason to belong to the inventors. The public good fully coincides in both cases with the claims of individuals. The States cannot separately make effectual provision for either of the cases, and most of them have anticipated the decision of this point, by laws passed at the instance of Congress.

The Federalist No. 43 at 278-79 (James Madison) (Modern Library 1937).

[FN231]. Thomas McKean told the Pennsylvania convention that:

The power of securing to authors and inventors the exclusive right to their writings and discoveries could only with effect be exercised by the Congress.... [T]he laws of the respective states could only operate within their respective boundaries, and therefore, a work which had
cost the author his whole life to complete, when published in one state, however it might there be secured, could easily be carried into another state in which a republication would be accompanied with neither penalty nor punishment - a circumstance manifestly injurious to the author in particular, and to the cause of science in general.


[FN232] I forbear from dredging up every unpublished letter and every comment in any ratifying convention that might bear on the subject. William Grayson, for example, warned the Virginia Convention that the Congressional power over the seat of government could be used to create companies with monopolies over national trade. See 10 Kaminski's Documentary History, supra note 216, at 1184, 1191. The feeling against trade monopolies was not confined to the proto-United States. The institution of companies with trade monopolies was subject to general attack during the eighteenth century. See E. L. J. Coornaert, European Economic Institutions and the New World; The Chartered Companies, in IV The Cambridge Economic History of Europe 220, 271-73 (E. E. Rich & C. H. Wilson eds., Cambridge 1967).

[FN233] 2 Documentary History of the Constitution of the United States of America (1786-1870) 95, 142, 274 (1894). North Carolina sent this suggestion to Congress on August 1, 1788 without ratifying the Constitution. See id. at 266. President Washington conveyed North Carolina's ratification to Congress on January 12, 1790. See id. at 275-76. Rhode Island made the same suggestion, but not until after the first Congress had forwarded the Bill of Rights to the States for ratification. See id. at 319-21. On Thursday, September 24, 1789, the House requested the President to transmit the constitutional amendments proposed by Congress to the several states. See 1 Annals of Cong. 947 (Joseph Gales ed., 1789) (House entry for Sept. 24, 1789) [hereinafter "Annals" ]. The Senate concurred the next day. Id. at 90 (Senate entry for Sept. 25, 1789).

[FN235]. See Annals, supranote 233, at 448-60 (speech of James Madison, House of Representatives, June 8, 1789).

[FN236]. See id.

[FN237]. See id. at 786-88 (denying Gerry's motion to the House on Aug. 18, 1789 requesting the Committee of the Whole consider such amendments as were suggested by any state but not reported out by the select committee). Id. at 808 (denying Gerry's motion to the House of Aug. 18, 1789 to add an amendment reading, "That Congress erect no company of merchants with exclusive advantages of commerce"). Levy characterizes the first motion as an Anti-Federalist ploy to "intrude crippling political amendments." See Levy, supranote 223, at 38.

[FN238]. See James Madison, Property, 29 March 1792, reprinted in 1 Founders' Constitution, 598-99 (Philip B. Kurland & Ralph Lerner eds., 1987) ("That is not a just government, nor is property secure under it, where arbitrary restrictions, exemptions and monopolies deny to part of its citizens that free use of their faculties and free choice of their occupations....").


[FN241]. See McCulloch v. Maryland, 17 U.S. 316, 424 (1819) (assigning Congress the power to incorporate a bank).


The effect of patents on technological inventions is still controversial, despite their historical pedigree. See, e.g., Mark A. Lemley, Reconceiving Patents in the Age of Venture Capital, 4 J. Small & Emerging Bus. L. 137, 139-40 ("[W]e don't have a clue how innovation works"; "We don't, in fact, know for sure what impact patents have on innovation."; "some evidence suggests that patents may actually inhibit innovation."); Roberto Mazzoleni & Richard R. Nelson, Economic Theories About the Benefits and Costs of Patents, 32 J. of Econ. Issues 1031, 1031-32 (1998) (concluding that "the social benefits and costs of awarding patents for inventions" is neither "simple" nor "currently... well settled.").

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