

## Weeds and Seeds in the Supreme Court's Business Method Patents Decision: New Directions for Regulating Patent Scope

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In the 2010 *Bilski* decision,**fn.001** the Supreme Court visited the garden of doctrines on patent-eligible subject matter, a garden delineated in statutory terms by Section 101 of the Patent Act.**fn.002** The Court rejected categorical approaches, such as an enshrinement of a machine-or-transformation test as the sole measure for a patentable "process," or a ban on business-method patents, but it affirmed rejection of the patent claims in question, which concerned commodities trading hedging transactions, as drawn to an abstract idea. It relied on three Supreme Court precedents on the unpatentability of claims that "pre-empt" abstract ideas, *Benson* (1972),**fn.003** *Flook* (1978),**fn.004** and *Diehr* (1981).**fn.005** In a lengthy concurring opinion, Justice Stevens argued that, for historical and policy reasons, methods of doing business were categorically excluded from patent protection.**fn.006**

Unfortunately, in *Bilski*, the Court passed an opportunity to pull some doctrinal weeds that have been proliferating in the garden for years. But the Court also

planted seeds for the growth of a more rational approach to regulating patent scope, one that is both consistent with the established doctrinal structure of the patent system and sufficiently limiting of overreaching patent claims to intangible processes, business methods and natural phenomena.

Critical to development of a better approach to Section 101 patent-eligible subject matter is the need to recognize a distinction between two inquiries: (1) has an inventor made and disclosed a new and useful patentable invention? and (2) what is the appropriate scope of protection for the patentable invention?**fn.007** The first inquiry, which I shall call the "Invention Achievement Inquiry," focuses on whether the inventor has conceived and reduced to practice a new and useful invention, typically in the form of a specific embodiment or working example.**fn.008** The second inquiry, which I shall call the "Protection Scope Inquiry," focuses on whether and to what extent the inventor may claim the invention generically, that is, not as limited to the precise embodiment or embodiments that the inventor has devised.**fn.009**

Both inquiries can and should be conducted using established and well-understood doctrinal tools, which, unlike the Section 101 patent-eligible subject matter tool used by the Court in *Bilski*, entail full consideration of the facts surrounding an alleged invention.**fn.010** Used with

appropriate vigor, the tools can effectively screen out virtually all claims to putative "inventions" that are, on analysis, only abstract ideas or natural phenomena, and all claims that pre-empt subject matter that is old, not practically useful or beyond what the patent applicant has actually invented. There rarely would be an occasion to reach a Section 101 abstract-idea challenge, as was pressed upon the Court in *Bilski*.

The approach would be implemented effectively by an edict to the primary decision-makers on patentability, that is, the examiners and appeals board of the Patent and Trademark Office (PTO), the district courts and the United States International Trade Commission (ITC), not to address Section 101 abstract-idea issues until a factual background has been developed, which usually but not inevitably would involve assessing compliance of a given patent claim with the Section 112 disclosure requirements of written description and enablement and the Sections 102 and 103 requirements of novelty and nonobviousness.**fn.011** In a litigation context, a Section 101 challenge should and usually would be addressed only after a claim construction proceeding, such as a *Markman* hearing, in which an allegedly abstract claim would be interpreted in view of the patent specification teachings and the understanding of a person of ordinary skill in the art.**fn.012**

Because of the vagueness of the concepts of "an

idea" and "abstract" and the inability to clearly and objectively distinguish between (1) the millions of claims that have been included in presumptively valid, existing patents and (2) the category of an impermissible idea (concept) "pre-empting" claim, the Section 101 abstract idea pre-emption inquiry can lead to subjectively-derived, arbitrary, unpredictable results. This uncertainty does substantial harm to the effective operation of the patent system. That harm would be largely avoided by implementing the suggested "facts-first" approach, which minimizes the need to engage in the difficult legalistic inquiry into the meaning of "abstract idea" and whether a given patent claim "pre-empts" it.

A note on the organization of this Essay. To delineate sections of analysis, it uses only outline numbers (I.A. ... II.A) and no descriptive subject headings. It is up to the reader to determine what each section and subsection is about. Not helpful, gentle reader? Surely no one can criticize an author for following Supreme Court precedent! For this naked numbering is exactly the scheme of the opinion for the Court by Justice Kennedy in *Bilski*. The scheme required every reader of the opinion immediately to scramble to determine what was meant by "JUSTICE KENNEDY delivered the opinion of the Court, except as to Parts II-B-2 and II-C-2" and "JUSTICE SCALIA does not join Parts II-B-2 and II-C-2."**fn.013**

## I.

### A.

In assessing *Bilski*'s significance for the future course of patent law, one must resist the temptation to dwell on the Court's reasoning offered to support the bottom line result (to wit, that the *Bilski* applicants' claims to a commodities-hedging method were unpatentable as preemptive of abstract ideas). The reasoning is sparse and palpably unpersuasive.**fn.014** As Justice Stevens persuasively notes in his concurring opinion, the Court offers no explanation of what is "an abstract idea" or why the claims at issue "pre-empt" the "concept" of hedging.**fn.015** Rather, the Court merely refers to its own opaque precedent.**fn.016**

A more fruitful starting point is a common-sense question: what is it about the genera of claims that came before the Court in decisions such as *Benson* and *Bilski* that disturbed the minds of generalist Supreme Court justices, leading them to reject, intuitively, the allowability of the claims?

Notably, all nine justices in *Bilski* agreed that the applicants' claims were bad on the merits even though they could not muster a majority on any new standard or rule for assessing goodness or badness.**fn.017**

After that question is answered, one can then turn to another question: are the traditional doctrines of patent law regulating patent claim scope sufficient, if robustly

applied, to alleviate the justices' concerns without reliance on an amorphous jurisprudence of patent-eligible subject matter that has caused, and threatens to continue to cause, an additional layer of dispute and uncertainty in a system of law that already suffers from an ample supply of both?

## **B.**

The answer to the first question is: the facially abstract wording of the claims must have struck the justices as not conforming to the constitutional goal of the patent system to award limited property rights only in exchange for disclosure of specific, real-world inventions that are both new and useful in a practical sense.

This adverse reaction to facially abstract patent claims is *not*, as might first be postulated, based solely on the breadth or abstractness of the language of the challenged claims. Almost all patent claims strike a lay reader as abstract. Rather, the reaction—wow! these claims are so broad as to preempt an abstract idea that is probably not even new—is fueled by a combination of (1) claim language abstractness, (2) the abstractness of the context in which the claims are presented to the Court and (3) possible misunderstanding of the function of claims in patents.

On the second contributor, in cases such as *Benson* and *Bilski*, the claims came before the Court in relatively naked form: as appeals from PTO rejections of claims in

applications.**fn.018** The rejections were based solely on lack of patent-eligible subject matter under Section 101. The claims had not been evaluated (1) for novelty and nonobviousness in relation to the prior art, (2) for appropriate scope in relation to supporting disclosure or (3) for definiteness. In such a procedural posture, little factual background on the significance of the alleged inventions comes before the Court. Missing is information on what were the problems and attempted solutions in the prior art? How did the disclosed invention solve those problems? What working examples (if any) did the inventors provide in their application? What research efforts were made by the inventors? Not being in a context of alleged infringement, the claims are not construed and applied to real-world commercial products and productive enterprises. In an infringement suit, it often becomes clear, especially with apparently broad claims to nontraditional subject matter such as business methods, that the claims are nowhere near as preemptively broad in scope as a first abstract reading of the claims might suggest.**fn.019**

On the third contributor, it is important to keep in mind that the function of claims is *not*, as the Court's discussion in *Bilski* misleadingly implies, to "explain" the invention, to "suggest ... approaches," or to "advise" using certain techniques.**fn.020** Rather, the function of claims is two-fold: to set the boundaries of the invention in order to distinguish the prior art and to define the scope of

protection.**fn.021** Explanation of the invention is the function of a patent's specification, *not* its claims.**fn.022** A specification typically includes not only a general description of the invention but also examples.**fn.023** The twin functions of claims has been clearly recognized by the Supreme Court in decisions prior to *Bilski*.**fn.024**

### C.

The answer to the second question—are there sufficient weapons in the traditional doctrinal arsenal of patent law to trim down overreaching claims to abstract ideas?—is: yes, indeed.

What are those weapons? At least eight come to mind. All are well-illustrated by precedent, new and historic. All depend, at least to some degree, on the facts and circumstances concerning a claimed invention and, in some instances, on any alleged infringement. All are less amorphous than the Section 101 abstract-idea inquiry applied in *Bilski*.

#### 1.

The primary claim-scope regulator is the enablement requirement. An inventor must provide in the specification filed as part of an application a teaching of how to make and use the invention.**fn.025** Case law confirms that the specification must not only enable an example or embodiment but also enable the full scope of any claim.**fn.026** Thus, enablement is the key doctrine that

pertains to both the Invention Achievement Inquiry and the Protection Scope Inquiry.

Enablement as a regulator of claim scope has an honorable history, tracing at least to the Supreme Court's landmark decision on the patent on Morse's invention of the telegraph, *O'Reilly v. Morse* (1853).**fn.027**

A frequently-cited lower court decision on enablement, *In re Wands* (1988),**fn.028** lists eight factors, which indicate the fact-sensitivity of the enablement inquiry.**fn.029**

In short, unduly broad claims should not be allowed or sustained because they fail to provide an enabling disclosure.

## 2.

The Court of Appeals for the Federal Circuit, which has appellate jurisdiction over patent-related appeals from the PTO, district courts and the ITC,**fn.030** has construed the first paragraph of Section 112 as imposing a "written-description-of-the-invention" requirement that is distinct from the enablement requirement.**fn.031**

The Federal Circuit has used the written description requirement to regulate claim scope as well as to determine whether an inventor has completed the inventive process.**fn.032** In particular, the Federal Circuit has used the requirement to restrict patents when an inventor had disclosed and claimed an "invention" only by reference to a "function or result" without reciting "sufficient materials

to accomplish that function—a problem that is particularly acute in the biological arts."**fn.033**

The purpose of the requirement, as recited by the Federal Circuit, is very similar to that given by Supreme Court in defense of the Section 101 "abstract ideas" exception. The written description requirement restricts patents to "complete and final inventions[s]," and precludes patents for (1) "basic research, including research into scientific principles and mechanisms of action," as opposed to "the practical implications of ... such research," (2) "for academic theories, not matter how groundbreaking or necessary to the later patentable inventions of others" and (3) "research plans," which "impose costs on downstream research."**fn.034**

There is an important difference between the written description requirement as applied by the Federal Circuit and the Section 101 abstract-idea exception: the former takes into account *facts* concerning the disclosed invention, including, importantly, whether the inventor disclosed one or more examples of the invention and not just the abstract breadth of the claim in question.**fn.035**

### 3.

The Patent Act requires that a claimed invention be "useful." Utility is also requirement for a reduction to practice.**fn.036**

The Supreme Court reads the utility requirement as mandating that the inventor disclose a substantial practical

utility, a "specific benefit" in "currently available form."**fn.037** It held that an inventor did not show a reduction to practice by devising a new process for making a compound when the inventor knew only that the compound was "the subject of serious scientific investigation."**fn.038**

In turn, the Federal Circuit has found noncompliance with the utility requirement (1) when an inventor disclosed and claimed a new polymer but only disclosed, as a utility, that the polymer was "plastic-like"**fn.039** and (2) when an inventor disclosed and claimed gene segments (ESTs) without disclosing the entire gene or the protein for which the gene encodes.**fn.040**

The purpose of the utility requirement is, in part, to assure that a patent issues for the discovery of practical results and does not amount to a "hunting license."**fn.041**

Like the written description requirement, the utility requirement is a response to the concerns underlying decisions such as *Benson* and *Bilski*, that is, restricting patents to real world inventions. And, again, the lack of utility depends on the facts, including the prior art and the content of the inventor's disclosure, not merely the abstract scope of the claim.

#### 4.

A claimed invention must, to qualify for a patent, meet two prior art patentability conditions: novelty and nonobviousness.**fn.042**

The prior art conditions operate in both the Invention Achievement Inquiry and the Protection Scope Inquiry. An inventor may devise a new and nonobvious invention, exemplified by one or more embodiments, but the inventor's claims to the invention may fail the prior art conditions because they are too broad, reading on both novel, nonobvious subject matter and on the prior art.**fn.043** The conditions are critically important regulators of all patent claims. In its 2007 *KSR* decision, the Supreme Court reminded the patent law world of the need to carefully assess patent claims for compliance with the nonobviousness condition.**fn.044**

The nonobviousness condition has particular pertinence to the types of broad, generic claims that have generated Section 101 challenges: business methods and bio-medical discoveries.

For business methods, a claimed invention may entail taking a well-known, widespread practice and improving it in ways only recently made possible, and potentially obvious, by new technologies, such as more powerful electronics, computer implementation, and internet information searching and distribution. Such a scenario may be one of at least *prima facie* obviousness.**fn.045**

Indeed, the commodity-hedging invention claimed in *Bilski* may have been of this nature. The Court, in effect, found the claimed subject matter, broadly construed, old or obvious, by stating that hedging was a "long prevalent"

"fundamental economic practice."**fn.046** Being of that mind, and being unable to garner a majority position on a positive standard for Section 101 patent-eligible "processes," the Court could have spared the patent law community by dodging the Section 101 question and simply affirming the rejection of the claims for prima facie obviousness. That is exactly what the Court did in 1976 when presented with claims to a computer-implemented banking system.**fn.047**

For bio-medical discoveries, the nonobviousness condition may screen out many broad claims, which may result from the application of known techniques to isolate valuable biological subject matter.**fn.048**

## 5.

A patent claim must meet a requirement of definiteness.**fn.049**

In *Bilski*, Justice Kennedy, in the portion of his opinion that represented the views of only four justices, reiterated his contention, previously expressed as a concurrence in the *eBay* permanent injunction case,**fn.050** that "some business method patents raise special problems in terms of vagueness and suspect validity."**fn.051** Justice Stevens in his concurring opinion for four justices repeats the charge of potential "vagueness."**fn.52** Hence, eight of the nine justices opined that some business method patents are "vague."

Neither Justice Kennedy nor Justice Stevens links the vagueness charge to the legal standard for claim definiteness.

In a number of infringement cases involving patents on business methods, difficult questions of claim construction have arisen.**fn.053** Despite the difficulties, the Federal Circuit has tended to reject indefiniteness charges, applying its extraordinarily lenient standard, which allows claims to pass muster unless they are not amenable to construction or are insolubly ambiguous.**fn.054** This standard may be inconsistent with the standards articulated in earlier Supreme Court decisions.**fn.055**

## 6.

The patentability conditions (enablement, written description, utility, novelty, nonobviousness and definiteness) serve to trim the literal scope of patent claims and, thus, are applicable at the ex ante stage of examining claims for patentability and evaluating issued claims in patents.

Other patent law doctrines are available that can be directly responsive to the generalist judicial concern with broad patent claims: that they are unjustifiably restrictive of subsequent innovation. The ex post doctrines are the doctrine of equivalents, the reverse doctrine of equivalents and claim construction.

The doctrine of equivalents is, by nature, one that potentially expands patent scope.**fn.056** However, it can be and has been applied with a sensitivity to the policy against unduly restricting subsequent innovation that Supreme Court justices find to be embedded in the structure of the patent system. The prevailing standard for equivalency, substantial change, can take into account whether an accused equivalent represents a merely inconsequential design around, on the one hand, or a significant innovation, on the other.**fn.057**

## 7.

A tool expressly recognized by the Supreme Court for preventing broad patent claims from inappropriately corraling subsequent innovation is the "reverse doctrine of equivalents."**fn.058**

The Federal Circuit has virtually emasculated the reverse doctrine.**fn.059** The Supreme Court would likely not approve.

## 8.

A patent claim's effective scope depends not solely on its bare wording but also how the claim is construed.

Claim construction has been the focus of much recent patent jurisprudence.**fn.060**

In *Bilski*, the Supreme Court did not consider the precise scope of the rejected claims but predicated its

ruling on an assumption that they broadly covered the "concept of hedging risk" and "the application of that concept to energy markets." The Court's loose treatment of the applicants' claims may cause distress among patent professionals, but it is consistent, in a rough way, with prevailing doctrine, which directs examiners of the Patent and Trademark Office to give claims under examination their broadest reasonable scope.**fn.061** An applicant can overcome prior art rejections of the broadly-construed claims by amending them to narrow and clarify their scope.**fn.062**

In an infringement suit, a claim will be construed in light of the embodiments and examples in the specification. The Federal Circuit is adamant that features shown in examples should not be extraneously imported into the claims as limitations,**fn.063** but despite such general protestations the court often reads claims narrowly so as to avoid conferring protection scope beyond the disclosed invention.**fn.064**

Some aspects of Federal Circuit claim construction jurisdiction dilute the value of claim construction as a regulator of appropriate claim scope.**fn.065** For example, the Federal Circuit gives only limited consideration to the relation between the claimed invention and the prior art.**fn.066**

The Federal Circuit has persistently sought, in its opinions on claim construction, the doctrine of equivalents

and prosecution history estoppel, to achieve a high level of certainty and objectivity in the determination of patent claim scope, primarily by emphasizing literal claim scope.**fn.067** Whether such a level has been achieved can be doubted, given the persistence of a large number of appeals on claim construction issues, the high reversal rate and the simmering question whether the Federal Circuit's de novo review standard for such issues is justified.**fn.068**

The quest also may be at odds with the views of Supreme Court justices who perceive policy problems with patent claims of undue scope.

In the 2005 *SmithKline* case,**fn.069** an unusual fact pattern arose that illustrated the rather extreme position of some Federal Circuit judges in refusing to entertain policy-based considerations in interpreting patent claim scope. Simplifying the facts, a first patent claimed a class of compounds (paroxetine) useful as an ingredient in an anti-depression drug. Later, the drug's maker discovered that a particular form of the compound (hemihydrate) was superior to the original form (anhydrate) that it had used. It obtained a second patent on the anhydrate form. A generic drug company sought to market a generic version of the drug maker's original form upon expiration of the first patent. Even though the generic company endeavored to produce only the anhydrate form of the expired patent, the patent owner asserted infringement of the second hemihydrate-form patent. Its theory was that "seeding"

from the atmosphere caused an extremely small portion of the subsequently-patented hemihydrate form to appear in the generic's anhydrate-based drug product.

Judge Richard Posner, law professor, Seventh Circuit judge and co-author of a text on intellectual property law,**fn.070** heard the case, sitting by designation in the district court. He wrote a typically interesting Posner opinion finding no infringement but upholding the patent's validity.**fn.071** The second patent's claim was quite simple; it recited: "crystalline paroxetine hydrochloride hemihydrate."**fn.072** The patent owner argued that the generic product infringed even if it contained only a single crystal of hemihydrate in an undetectable quantity. Judge Posner found the argument "heady stuff": "someone not steeped in patent law might think it loony."**fn.073** He noted that that "[t]he 'single crystal' interpretation of claim 1 may be extravagant, but it is not *completely* ridiculous, whatever a lay-person might think."**fn.074** Judge Posner posited that the claim would be invalid as indefinite if construed as broadly as the patent owner urged because parties would not be able to avoid infringement. However, to avoid that result, he construed the claim as "excluding hemihydrate produced by involuntary conversion of a proportion of an anhydrous mixture so small as to lack any commercial significance."**fn.075** He noted that "[t]he single-crystal interpretation of claim 1 has absurd consequences that do not serve any policy of patent

law."**fn.076**

On appeal, the Federal Circuit rejected Judge Posner's policy-based interpretation.

"Claim construction ... is not a policy-driven inquiry. ... [I]t is a contextual interpretation of language. The scope of patent claims can neither be broadened nor narrowed based on abstract policy considerations regarding the effect of a particular claim meaning. ... For this precise reason, this court has repeatedly stated that a court must construe claims without considering the implications of covering a particular product or process."**fn.077**

The Federal Circuit rejected any suggestion of indefiniteness because the claim was "plain on its face" to a chemist.**fn.078** It noted the possibility of a "new equitable defense in this unprecedented instance," that is, unavoidable infringement, but found it unnecessary to evaluate that defense because it held the patent invalid for inherent anticipation.**fn.079**

## **II.**

### **A.**

As demonstrated above, at least eight established doctrinal tools of patent law are available to preclude preemptive claiming of abstract ideas and natural phenomenon. But does the Supreme Court's *Bilski* decision

mean that the patent system must continue to struggle with the largely unnecessary but uncertainty-creating Section 101 abstract idea pre-emption prohibition doctrine?

As the title of this Essay suggests, *Bilski* contains mixed messages, leaving some weeds in the garden but planting seeds of change.

## **B.**

The weeds *Bilski* leaves in the garden are obvious, noxious and odious but not necessarily so dominating as to smother the growth of the new seeds of a more rational approach to patent claim scope assessment that *Bilski* plants.

### **1.**

Foremost among the doctrinal weeds is the Court's confirmation of the three exceptions to Section 101 process coverage articulated in the 1972 *Benson* decision and the "preemption" corollary to those exceptions.

An initial question about the Three Exception is: what exactly are the Three? and are there actually *three*? or two? or four? In the 1972 *Benson* decision, the Court enumerated, without explanation or citation of authority: (1) "phenomena of nature, though just discovered," (2) "mental processes" and (3) "abstract intellectual concepts."**fn.080** In surrounding sentences, *Benson* referred to quotations from Supreme Court cases reciting,

as unpatentable as such, "an idea," "a principle, in the abstract" and a "law of nature."**fn.081** "Mental processes" was likely included because at the time (1972) there was a body of case law on "mental steps," which the lower court in *Benson* had restricted.**fn.082** In the 1981 *Diehr* decision, the Court omitted "mental processes" and recast the trio: (1) "laws of nature," (2) "natural phenomena" and "abstract ideas."**fn.083** *Bilski* quotes *Diehr* and refers to the trio as "three specific exceptions."**fn.084**

The Court did not explain the difference between "laws of nature" and "natural phenomena."**fn.085** One could craft an argument that there are only *two* categories of concern in regard to patent eligible subject matter: patent claims encompassing abstract ideas and patent claims encompassing natural phenomena.

A more fundamental question is: other than as high-sounding platitudes, are the *Benson-Flook-Diehr* exceptions at all helpful in determining patent-eligible subject matter?

The Three Exceptions, as such, concern subject matter that does not meet even the broadest ordinary meaning of a "process," that is, an operative series of steps to achieve a result. All are descriptions of, not prescriptions for, steps. Hence, they are not "exceptions" at all. Patent aspirants have rarely even attempted to claim ideas or natural phenomenon truly "in the abstract."**fn.086** Few would defend their right to do so.

The bite from the Three Exceptions comes from the "pre-emption" expansion of the exceptions. That is, *Benson* and *Bilski* rejected claims that were to processes but were so broad or generic, in the Court's view, as to cover ("pre-empt") all practical applications of the idea or natural phenomenon.**fn.087**

The intuitive appeal of the Three Exceptions arises in relation to the Invention Achievement Inquiry (has the inventor achieved a new and useful invention?). Who can object to barring patents when all the "inventor" contributes is formulation of an abstract idea or discovery of a natural phenomenon? However, the exceptions are extended by the Court through the "pre-emption" concept to the Protection Scope Inquiry, as to which the intuitive appeal is not so strong. If an "inventor" has contributed an "idea" or phenomenon and also made and disclosed a practical application of it, there is likely to be legitimate debate about the extent to which the inventor should be able to claim a property right beyond the specific implementation. That debate should focus on the facts, not just a logical analysis.

The shift from the first inquiry to the second inquiry is made openly in *Bilski* based on precedent.**fn.088** The shift was more devious (or, charitably, subtle) in *Benson*. *Benson* postulated that abstract ideas are not patentable, equated (without explanation) a new mathematical algorithm with an idea and then dismissed specific claims

as, in effect, for the idea because the claims covered all known practical uses of the idea/algorithm, to wit, use in programming digital computers.**fn.089**

To the *Benson* Court, the facts concerning the invention mattered not all. For example, for all the Court knew or cared, the algorithm may have been, at the time, a great novel advance in manipulating numerals in a digital environment, the inventors may have disclosed in their patent specification dozens of detailed, practical applications of the algorithm to solve specific programming problems and skilled persons in the art may have immediately recognized how to use the algorithm to solve other problems.

The result in *Benson* would have been the same in such a scenario as one in which the inventors worked solely on number theory and disclosed in their patent specification no practical applications or working examples on using the algorithm. Applying the traditional, historically-tested doctrines of patent law, the two scenarios would be distinguished. In the latter scenario, the inventors would not have survived the Invention Achievement Inquiry, much less the Protection Scope Inquiry. The inventor showed no reduction to practice of an invention and certainly did not justify broad claims.

## 2.

*Bilski* left other doctrinal weeds unpulled.

The Court continues the unfortunate use of language begun in *Benson* on the status of tests or standards, such as the MORT (machine-or-transformation) test. The test is said to be "an important and useful clue" and an "investigative tool."**fn.090** "Clue" may be an appropriate word for a detective game**fn.091** but hardly for the development and application of legal standards to resolve serious legal questions. The Court makes clear that a claim's compliance with MORT is not a *necessary* condition. But is it a *sufficient* one? And the Court provides not even a clue on important issues on the meaning of the MORT test that the Federal Circuit had left open. For example, in its en banc *Bilski* decision, the Federal Circuit left open "whether or when recitation of a computer suffices to tie a process claim to a particular machine."**fn.092**

### 3.

A potential new weed is the Court's characterization of Section 101 as a "threshold."**fn.093**

A thesis of this essay is that Section 101 patent-eligible subject matter issues are best addressed in the factual context of the invention as disclosed and claimed and not by addressing claims in the abstract. It follows from that thesis that Section 101 issues would be better addressed after other fact-based conditions are addressed, particularly the prior art based conditions of novelty and

nonobviousness and the disclosure requirements of Section 112.

No doubt, no valid claim can be issued or upheld unless it complies with Section 101 and, conversely, a claim that flunks Section 101 cannot be upheld even though it passes all other patentability tests (assuming that is possible). It is likely this is all the Supreme Court meant by "threshold." It did not purport to direct the order of resolving patentability questions regarding a particular patent claim.

There is, of course, a neatness in addressing patentability in numerical order, Section 101 (eligible subject matter and utility), Section 102 (novelty), Section 103 (nonobviousness) and so on. Judge Giles Rich used that ordering in his famous "three doors" analogy of patentability in *In re Bergy* (1979).**fn.094**

The Federal Circuit has pondered questions on the order of resolving Section 101 and other issues. In *In re Comiskey* (2009),**fn.095** a Federal Circuit panel held that it could address Section 101 compliance by claims that the Patent and Trademark Office had rejected only for obviousness over the prior art (Section 103).

In its *Bilski* decision, the Federal Circuit emphasized that it had not held, in *Comiskey*, that a PTO examiner must "conduct a § 101 analysis before assessing any other issue of patentability." But it still viewed Section 101 compliance as a threshold.

"As with any other patentability requirement, an examiner may reject a claim solely on the basis of § 101. Or, if the examiner deems it appropriate, she may reject the claim on any other ground(s) without addressing § 101.

“But given that § 101 is a threshold requirement, claims that are clearly drawn to unpatentable subject matter should be identified and rejected on that basis. Thus, *an examiner should generally first satisfy herself that the application’s claims are drawn to patent-eligible subject matter.*”**fn.096**

The Federal Circuit's dictum is unsupported and dubious: why should an examiner be required to struggle with a Section 101 abstract-idea analysis, governed by an overly-complex standard ventilated by appellate courts, if a broad claim can easily be rejected as obvious in view of the art or unsupported by an applicant's disclosure? And the same can be said for a district court considering a challenge to the validity of an issued patent claim.

### C.

Shifting to the positive aspects of *Bilski*, the Court majority planted a number of seeds that, if nurtured by future court decisions, will rejuvenate rationality in the law on patent-eligible subject matter.

## 1.

The most significant seed is planted close to the most noxious weed: the Three Exceptions and their "preemption" corollary.

Importantly, the Court refers to the ineligible categories as, indeed, "specific exceptions to § 101's broad [patent-eligibility] principles."**fn.097**

The very nature of an "exception" suggests that it should be applied restrictively. The Court adds to the restrictive tenor by (1) attaching the adjective "specific" to the exceptions that use words, such as "laws of nature" and "abstract ideas," that are not at all specific in their denotation, (2) noting that the exceptions "are not required by the statutory text"**fn.098** and (3) continuing them (only) "as a matter of statutory *stare decisis* going back 150 years."**fn.099** On the last, the Court cites and quotes only Supreme Court precedent in support of the exceptions. It offers no new reasoning in support of them.

Further cementing the exceptional character of the exceptions is the Court's warning that the "Three Exceptions" provided no authority to create new ones.

"This Court has not indicated that the existence of these well-established exceptions gives the Judiciary *carte blanche* to impose other limitations that are inconsistent with the text and the statute's purpose and design."**fn.100**

Thus, the Court rejects both the Federal Circuit's MORT-

as-the-exclusive-test approach and the argued ban on business method patents as "categorical limitations," that is, "broad and atextual approaches."**fn.101** It notes that such "categorical rules ... might have wide-ranging and unforeseen impacts."**fn.102**

This tone is a complete reversal of the restrictive sentiment in *Flook*, which warned that "It is our duty to construe the patent statutes as they now read, in light of our prior precedents," and that "we must proceed cautiously when we are asked to extend patent rights into areas wholly unforeseen by Congress."**fn.103**

Messages from the Supreme Court to the lower courts and all actors in the legal system, even in dictum and innuendo, carry great weight.**fn.104** The message on the Section 101 "exceptions" is that they are out of fashion and should not be applied expansively. The message is: stick to the statute, that is, the language of the Patent Act, which provides ample authority to regulate claims of undue breadth.

## 2.

Another seed that could grow into a more rational approach to claim scope is the Court's linking of the "Three Exceptions" to statutory requirements.

As noted, the Court states that the exceptions are "not required by the statute" and "atextual" but, in Part II A of the majority opinion, the Court does suggest a statutory

basis: the Three Exceptions are "consistent with the notion that a patentable process must be 'new and useful.'" **fn.105** "New and useful" are adjectives in Section 101 that modify the four historical categories of patent-eligible subject matter (process, manufacture, machine and composition of matter). Later, in Part II B 1, the Court responds to "[c]oncerns about attempts to call any form of human activity a 'process' ": these concerns "can be met by making sure the claim meets the requirements of § 101." **fn.106**

One way to look at the words "new and useful" in Section 101, together with the words "invents" or "discovers," is that they limit the four categories to what the Article I patent power calls the "Useful Arts," **fn.107** which, in turn, has been translated into modern language as "technology." **fn.108** This general limitation has not been treated as having distinct force because the limitation is implemented by subsequent statutory provisions, including Sections 102 and 112. **fn.109**

This "seed" could well grow into a statutory-based "technological limitation," a limitation the Federal Circuit rejected in *Bilski*, giving as the primary reason the absence of supporting Supreme Court authority. **fn.110**

### III

In closing, the majority opinion gave license to the Federal Circuit to develop "limiting criteria" for restricting

business method patents and, perhaps, the scope of a patent-eligible "process" generally. However, the criteria must (1) "further the purposes of the Patent Act" and (2) be "not inconsistent with its text."**fn.111**

This is not the first time the Supreme Court has authorized the Federal Circuit to act as its surrogate in developing patent-law standards. In 1997, the Court acknowledged the unhelpful general standards for infringement of a patent claim under the doctrine of equivalents (substantial difference and similarity of function, way and result) but delegated to the Federal Circuit the task of developing appropriate "linguistic frameworks" for equivalency.**fn.112**

"[W]e see no purpose in going further and micro-managing the Federal Circuit's particular word-choice for analyzing equivalence. We expect that the Federal Circuit will refine the formulation of the test for equivalence in the orderly course of case-by-case determinations, and we leave such refinement to that court's sound judgment in this area of its special expertise."**fn.113**

Since 1997, the Federal Circuit has done little such refinement, continuing to recite the same general verbal standards.**fn.114** This suggests that delegating difficult standards-developing tasks to an "expert" appellate court, which has itself shown a tendency to fracture in a manner similar to the Supreme Court itself,**fn.115** will not

inevitably generate a major improvement in the verbalization of patent law standards.

For all the reasons above, the best response of the Federal Circuit to the Supreme Court mandate to develop "other limiting criteria" is to focus, with an increased sensitivity to concerns about undue claim scope and the pre-emption of abstract ideas, on the established ex ante patentability standards, such as obviousness and enablement, and ex post infringement standards, such as claim construction and the reverse doctrine of equivalents.

If, as argued above, the perceived problem with claims to intangible methods and "natural phenomenon" is, indeed, undue claim scope, the solution should not be the creation of new "limiting criteria." That patent law already has more than enough claim scope regulating standards should be evident by referring to the landmark 1990 work of scholarship on patent claim scope by law professor Robert Merges and economist Richard Nelson.<sup>fn.116</sup> In this classic and influential article, Merges and Nelson explored in depth the economic and other policy considerations that should regulate patent claim scope. Interestingly, Merges and Nelson discuss only *two* legal tools (one ex ante and one post ante) for achieving the balancing of policies and interests that they advocate: enablement and the reverse doctrine of equivalents. Just twenty years ago, these thoughtful commentators saw no need for additional doctrines, such as written description

and Section 101 abstract idea pre-emption, to regulate patent claim scope appropriately. Surely it would lead to a sounder patent system to have the thousands of patent examiners, attorneys, agents, judges and others who must address issues on patent claim scope concentrate on two established doctrinal tools rather than to be distracted by a proliferation of "limiting criteria." Here, as in many areas of the law, one should apply Ockham's Razor: favor simplicity over complexity and do not multiply entities beyond necessity.**fn.117**

A final thought. How would this analysis have changed if Justice Stevens had garnered one more vote in *Bilski*, making his position that business method patents are excluded from patentability that of the Court majority? In truth, not much. Business methods could have been added to the short list of specific atextual exceptions justified by statutory stare decisis. Justice Stevens garners considerable evidence that a business-methods exception was recognized in case law, Patent Office practice and treatises on patent law long before Congress codified the patent statutes in 1952.**fn.118** Scholarly commentary cited by Justice Stevens suggests that the exception can be justified without doing violence to the fundamental purposes of the patent system.**fn.119** Recognizing the exception would have created issues concerning its scope, issues discussed neither by the majority nor by Justice Stevens. Relevant to those issues would be the experience

in the European Patent System, which expressly excludes patent claims to business methods but only "as such."**fn.120**

Donald S. Chisum Article

## **Footnotes**

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fn. 001. *Bilski v. Kappos*, 130 S. Ct. 3218 (2010).

fn. 002. Section 101 provides:

"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."

35 U.S.C. § 101.

fn. 003. *Gottschalk v. Benson*, 409 U.S. 63 (1972).

For a discussion of *Benson*, see Chisum on Patents § 1.03[6][c].

A note on case names: in discussing cases, it is common to shorten the caption to the first party. But in Supreme Court cases, which are on certiorari from an

appeal from rejection of claims in a patent application, one of the parties is a government official, the "Director" of the Patent and Trademark Office, who was, for many years, entitled the "Commissioner." It is the practice to use the name of the applicant (or applicants), not the official. In *Bilski*, the applicants were *Bilski* and *Warsaw*. *Kappos* was the Director. In the prior three Section 101 decisions, the applicants were *Benson*, *Flook* and *Diehr*.

fn. 004. *Parker v. Flook*, 437 U.S. 584 (1978).

For a discussion of *Flook*, see Chisum on Patents § 1.03[6][e].

fn. 005. *Diamond v. Diehr*, 450 U.S. 175 (1981).

For a discussion of *Diehr*, see Chisum on Patents § 1.03[6][g].

fn. 006. *Bilski*, 130 S. Ct. at 3231-58.

fn. 007. For a discussion of this distinction in the context of the written description requirement of 35 U.S.C. Section 112, see Donald S. Chisum, "Written Description of the Invention: *Ariad* (2010) and the Overlooked Invention Priority Principle," 2010 *Patently-O Patent L.J.* 72.

fn. 008. For a discussion of "reduction to practice" in patent law, see Chisum on Patents § 10.05, § 10.06.

fn. 009. As discussed below, the primary regulator of claim scope is the enablement requirement of Section 112. See Chisum on Patents § 7.03[7][b].

fn. 010. See, e.g., *AK Steel Corp. v. Sollac*, 344 F.3d 1234, 1245 (Fed. Cir. 2003) (“whether a patent complies with the enablement requirement depends upon a factually intensive inquiry regarding the amount of experimentation required,... an issue to be evaluated on a case-by-case basis.”).

fn. 011. The Supreme Court in *Bilski* referred to Section 101 compliance as a "threshold." Whether this means that Section 101 must be addressed before evaluating other patentability requirements is addressed below.

fn. 012. See, e.g., *EMI Group North America, Inc. v. Intel Corp.*, 157 F.3d 887, 891-92 (Fed. Cir. 1998), cert. denied, 526 U.S. 1112 (1999) (“Construction of the claims by the trial court is often conducted upon a preliminary evidentiary hearing, called a Markman hearing in homage to the decision[, *Markman v. Westview Instruments*, 517 U.S. 370 (1996),] that established that this step must be performed by the judge, not the jury.”).

fn. 013. *Bilski*, 130 S. Ct. at 3223

fn. 014. That the applicants' invention, even as most broadly claimed, was not for the abstract idea of financial "hedging" in toto and "in the abstract" should be evident to anyone contemplating whether there are ways of engaging in hedging without carrying out the series of steps recited in claim 1.

Claim 1 is recited in full by the Federal Circuit in *Bilski* as follows:

"A method for managing the consumption risk costs of a commodity sold by a commodity provider at a fixed price comprising the steps of:

(a) initiating a series of transactions between said commodity provider and consumers of said commodity wherein said consumers purchase said commodity at a fixed rate based upon historical averages, said fixed rate corresponding to a risk position of said consumer;

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

(c) initiating a series of transactions between said commodity provider and said market participants at a second fixed rate such that said series of market participant transactions balances the risk position of said series of consumer transactions."

*In re Bilski*, 545 F.3d 943, 949 (Fed. Cir. 2008) (en banc),

aff'd, 130 S. Ct. 3218 (2010).

Importantly, one cannot legitimately determine that this series of steps encompasses all practical ways of hedging commodity prices without considering more facts and evidence than either the Federal Circuit or the Supreme Court deemed to be necessary to resolve the Section 101 abstract-idea inquiry.

fn. 015. Justice Stevens noted:

"The Court construes petitioners' claims on processes for pricing as claims on 'the basic concept of hedging, or protecting against risk,' ... and thus discounts the application's discussion of what sorts of data to use, and how to analyze those data, as mere 'token postsolution components,' .... In other words, the Court artificially limits petitioners' claims to hedging, and then concludes that hedging is an abstract idea rather than a term that describes a category of processes including petitioners' claims. Why the Court does this is never made clear. One might think that the Court's analysis means that any process that utilizes an abstract idea is itself an unpatentable, abstract idea. But we have never suggested any such rule, which would undermine a host of patentable processes. It is true, as the Court observes, that petitioners' application is

phrased broadly. ... But claim specification is covered by § 112, not § 101; and if a series of steps constituted an unpatentable idea merely because it was described without sufficient specificity, the Court could be calling into question some of our own prior decisions. ... At points, the opinion suggests that novelty is the clue. ... But the fact that hedging is ' "long prevalent in our system of commerce," ' ... cannot justify the Court's conclusion, as 'the proper construction of § 101 . . . does not involve the familiar issu[e] of novelty' that arises under § 102. Flook, 437 U.S., at 588. At other points, the opinion for a plurality suggests that the analysis turns on the category of patent involved. ... (courts should use the abstract-idea rule as a 'too[l]' to set 'a high enough bar' 'when considering patent applications of this sort'). But we have never in the past suggested that the inquiry varies by subject matter.

"The Court, in sum, never provides a satisfying account of what constitutes an unpatentable abstract idea. Indeed, the Court does not even explain if it is using the machine-or-transformation criteria. The Court essentially asserts its conclusion that petitioners' application claims an abstract idea. This mode of analysis

(or lack thereof) may have led to the correct outcome in this case, but it also means that the Court's musings on this issue stand for very little." *Bilski v. Kappos*, 130 S. Ct. at 3235-36 (2009) (Stevens, J., concurring).

As a prior decision upholding a broad claim, Justice Stevens cited the 1888 case upholding Bell's patent on the telephone.

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

130 S. Ct. at 3236 n.1.

fn. 016. *Bilski*, 130 S. Ct. at 3229-30.

fn. 017. *Bilski*, 130 S. Ct. at 3230.

fn. 018. To obtain a patent, an inventor must file a timely application, which contains a description of the invention

and claims, with the Patent and Trademark Office. 35 U.S.C. § 111, § 112. An examiner determines compliance of the claims with the requirements of patentability. 35 U.S.C. § 131. The examiner may "allow" one or more claims or "reject" claims on designated grounds, such as Section 101 (ineligible subject matter) or Section 112 (insufficient description). 35 U.S.C. § 132. If an examiner twice rejects a claim or makes a rejection "final," the applicant may appeal to the Board of Patent Appeals and Interferences. 35 U.S.C. § 134. If the Board affirms the rejections, the applicant may seek review in the Court of Appeals for the Federal Circuit. 35 U.S.C. § 141. The applicants *Bilski* and *Warsaw* went that route. After the Federal Circuit affirmed the Section 101 rejection, the applicants successfully sought certiorari review by the Supreme Court.

In the prior Supreme Court Section 101 cases (*Benson*, *Flook*, *Diehr*, and *Diamond v. Chakrabarty*, 447 U.S. 303 (1980)), the appeals court had reversed a rejection, and it was the Government that sought Supreme Court review. *Bilski* is an unusual, if not unique, instance of an applicant obtaining Supreme Court review. The applicant was unsuccessful. However, an applicant in such a situation has several means for continuing to pursue claims in amended form or with new evidence. One means is a continuation application. E.g., *In re Donohue*, 766 F.2d 531 (Fed. Cir. 1985).

See generally Lemley & Moore, "Ending Abuse of Patent Continuations," 84 Boston U. L. 63 (2004).

fn. 019. See, e.g., *Trading Techs. Int'l, Inc. v. eSpeed, Inc.*, 595 F.3d 1340 (Fed. Cir. 2010).

Interestingly enough, *Trading Tech.*, like *Bilski*, involved a patent on a commodities trading system, specifically, a graphical user interface for such a system. The claims required, inter alia, a "static" display of prices. The court narrowly construed the term "static." The result was an accused infringer's original competitive system infringed but its two redesigned systems did not.

fn. 020. E.g., 130 S. Ct. at 3224 ("Some of these claims ... suggest familiar statistical approaches ....")

The Court's technical imprecision in discussing patent claims and other aspects of patent law and procedure may irritate patent practitioners but, in most instances, is harmless. For example, in *Bilski*, the Court refers to an examiner having "rejected petitioners' application", 130 S. Ct. at 3224, when, under the law, examiners only reject specific claims. 35 U.S.C. § 132(a).

However, Supreme Court imprecision on patent law terminology can generate genuine substantive ambiguity. For example, in *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 535 U.S. 722 (2002), the Supreme Court, in addressing the doctrine of prosecution history

estoppel, referred interchangeability to alleged equivalents that were "foreseeable" (1) at the "time of the amendment," 535 U.S. at 738, and (2) at the "time of the application," 535 U.S. at 740. In fact, an amendment to claims typically occurs years after the filing of an application, and, during that period, the state of the art and, therefore, the pool of potential foreseeable equivalents, may change considerably. The Federal Circuit was left to decide which date was operative and selected, without explanation, the date of the amendment. *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., Ltd.*, 344 F.3d 1359, 1365 n2 (Fed. Cir. 2003), cert. denied, 541 U.S. 988 (2004). See Chisum on Patents § 18.05[3][h][i].

fn. 021. See generally Chisum on Patents § 8.01.

fn. 022. Cf. *SRI Int'l v. Matsushita Elec. Corp.*, 775 F.2d 1107, 1121 n.14 (Fed. Cir. 1985) ("Specifications teach. Claims claim.").

fn. 023. See Chisum on Patents § 7.03.

As noted below, disclosure of an example may be critical for complying with the "written description of the invention" requirement in Section 112. Cf. *Ariad Pharmaceuticals, Inc. v. Eli Lilly & Co.*, 598 F.3d 1336 (Fed. Cir. 2010) (en banc).

fn. 024. E.g., Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co., 520 U.S. 17, 29 (1997) (recognizing, in the context of the doctrine of equivalents, "the definitional and public-notice functions of the statutory claiming requirement").

fn. 025. The first paragraph of Section 112 provides:  
"The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention."

35 U.S.C. § 112.

fn. 026. See, e.g., LizardTech, Inc. v. Earth Resource Mapping, Inc., 424 F.3d 1336, 1346 (Fed. Cir. 2005), reh'g en banc denied, 433 F.3d 1373 (Fed. Cir. 2006) (EXAMPLE: FUEL-EFFICIENT AUTOMOBILE:

"suppose that an inventor created a particular fuel-efficient automobile engine and described the engine in such detail in the specification that a person of ordinary skill in the art would be able to build the engine. Although the specification would meet the requirements of section 112

with respect to a claim directed to that particular engine, it would not necessarily support a broad claim to every possible type of fuel-efficient engine, no matter how different in structure or operation from the inventor's engine. The single embodiment would support such a generic claim only if the specification would 'reasonably convey to a person skilled in the art that [the inventor] had possession of the claimed subject matter at the time of filing,' *Bilstad v. Wakalopoulos*, 386 F.3d 1116, 1125 (Fed. Cir. 2004), and would 'enable one of ordinary skill to practice "the full scope of the claimed invention," ' *Chiron Corp. v. Genentech, Inc.*, 363 F.3d 1247, 1253 (Fed. Cir. 2004), quoting *In re Wright*, 999 F.2d 1557, 1561 (Fed. Cir. 1993); *PPG Indus., Inc. v. Guardian Indus. Corp.*, 75 F.3d 1558, 1564 (Fed. Cir. 1996). To hold otherwise would violate the Supreme Court's directive that 'it seems to us that nothing can be more just and fair, both to the patentee and the public, than that the former should understand, and correctly describe, just what he has invented, and for what he claims a patent.' *Merrill v. Yeomans*, 94 U.S. 568, 573-74(1876); see also *Phillips*, 415 F.3d at 1321 ('The patent system is based on the proposition that the claims cover only the invented subject matter.');

*AK Steel Corp.*, 344 F.3d at 1244 ('as part of the quid pro quo of the patent bargain, the applicant's specification must enable one of ordinary skill in the art to practice the full scope of the claimed invention').").

fn. 027. O'Reilly v. Morse, 56 U.S. (15 How.) 62 (1853).

fn. 028. In re Wands, 858 F.2d 731 (Fed. Cir. 1988).

fn. 029. In Wands, the court stated:

"[E]nablement requires that the specification teach those in the art to make and use the invention without undue experimentation. ...

Whether undue experimentation is needed is not a single, simple factual determination, but rather is a conclusion reached by weighing many factual considerations. ...

"Factors to be considered in determining whether a disclosure would require undue experimentation ... include (1) the quantity of experimentation necessary, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims."

858 F.3d at 731.

fn. 030. See Chisum on Patents § 11.06[3][e], § 21.02[5].

fn. 031. Ariad Pharmaceuticals, Inc. v. Eli Lilly & Co.,

598 F.3d 1336 (Fed. Cir. 2010) (en banc).

fn. 032. *Ariad*, 598 F.3d at 1349.

Fn. 033. *Ariad*, 598 F.3d at 1352-53.

Fn. 034. *Ariad*, 598 F.3d at 1353.

Fn. 035. "[A] sufficient description of a genus ... requires the disclosure of either a representative number of species falling within the scope of the genus or structural features common to the members of the genus so that one of skill in the art can 'visualize or recognize' the members of the genus." 598 F.3d at 1350.

See also *Capon v. Eshhar*, 418 F.3d 1349, 1357-58 (Fed. Cir. 2005).

Fn. 036. *Brenner v. Manson*, 383 U.S. 519 (1966).

Fn. 037. *Manson*, 383 U.S. at 534-35.

Fn. 038. *Manson*, 383 U.S. at 532.

Fn. 039. *In re Ziegler*, 992 F.2d 1197, 26 USPQ2d 1600 (Fed. Cir. 1993).

Fn. 040. *In re Fisher*, 421 F.3d 1365 (Fed. Cir. 2005).

Fn. 041. Manson, 383 U.S. at 536 ("a patent is not a hunting license. It is not a reward for the search, but compensation for its successful conclusion."); Fisher, 421 F.3d at 1376 ("granting a patent ... would amount to a hunting license because the claimed ESTs can be used only to gain further information ... The claimed ESTs themselves are not an end of [the applicant's] research effort, but only tools to be used along the way in the search for a practical utility.... the claimed ESTs have not been researched and understood to the point of providing an immediate, well-defined, real world benefit to the public meriting the grant of a patent.").

Fn. 042. See Chisum on Patents § 3.01 et seq., § 5.01 et seq.

Fn. 043. E.g., *Muniauction, Inc. v. Thomson Corp.*, 532 F.3d 1318, 1328 n.4 (Fed. Cir. 2008), cert. denied, 129 S. Ct. 1585 (2009) (under a "long-established rule," "[c]laims which are broad enough to read on obvious subject matter are unpatentable even though they also read on nonobvious subject matter." *In re Lintner*, 458 F.2d 1013 (CCPA 1972) (citing *In re Mraz*, 455 F.2d 1069, 1073 (CCPA 1972))).

Fn. 044. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398 (2007).

Fn. 045. E.g., *Leapfrog Enterprises, Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157 (Fed. Cir. 2007).

Fn. 046. *Bilski*, 130 S. Ct. at 3231.

Fn. 047. *Dann v. Johnston*, 425 U.S. 219 (1976). For a discussion of *Johnston*, see Chisum on Patents § 5.02[5][f]

In *Johnston*, unlike *Bilski*, the Patent Office had rejected the claims for both obviousness and lack of Section 101 patent-eligible subject matter. The Court opted to rely on the former and avoid difficult issues on the latter.

Could the Court in *Bilski* have addressed at least presumptive obviousness even though neither the PTO nor the Federal Circuit had done so? There is some historic precedent for doing so. See *Slawson v. Grant Street, R.R.*, 107 U.S. (17 Otto) 649 (1883). And the Supreme Court in *Bilski* did, in effect, address lack of novelty and obviousness by characterizing the claims as pre-empting a long-prevalent practice.

Note that the Federal Circuit has held that a court cannot address invalidity of a patent on a ground not raised by a party. *Lannom Mfg. Co., Inc. v. U.S. Int'l Trade Comm'n*, 799 F.2d 1572, 1579 (Fed. Cir. 1986). But, in view of *Slawson*, the Supreme Court may not agree.

Fn. 048. See *In re Kubin*, 561 F.3d 1351 (Fed. Cir. 2009).

Fn. 049. See Chisum on Patents § 8.03.

Fn. 050. *eBay Inc. v. MercExchange, L.L.C.* 547 U.S. 388, 396-97 (2006) (Kennedy, concurring) (noting the "potential vagueness and suspect validity of some of" the "burgeoning number of patents over business methods").

Fn. 051. *Bilski*, 130 S. Ct. at 3229.

Fn. 052. *Bilski*, 130 S. Ct. at 3256 (Stevens, concurring).

Fn. 053. E.g., *Blackboard, Inc. v. Desire2Learn, Inc.*, 574 F.3d 1371 (Fed. Cir. 2009); *Netcraft Corp. v. eBay, Inc.*, 549 F.3d 1394 (Fed. Cir. 2008)

Fn. 054. E.g., *Source Search Technologies, LLC v. LendingTree, LLC*, 588 F.3d 1063 (Fed. Cir. 2009).

*Compare Datamize, LLC v. Plumtree Software, Inc.*, 417 F.3d 1342, 1348 (Fed. Cir. 2005) (patent claim to an electronic kiosk user interface authoring tool, requiring, inter alia, variations with "a desired uniform and aesthetically pleasing look and feel" was indefinite).

Fn. 055. *United Carbon Co. v. Binney & Smith Co.*, 317 U.S. 228, 236 (1942) ("[t]he statutory requirement of particularity and distinctness in claims is met only when [the claims] clearly distinguish what is claimed from what

went before in the art and clearly circumscribe what is foreclosed from future enterprise.").

Fn. 056. Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co., 520 U.S. 17 (1997); Graver Tank & Mfg. Co. v. Linde Air Products Co., 339 U.S. 605 (1950).

See generally Chisum on Patents § 18.04.

Fn. 057. E.g., Wavetronix, LLC v. EIS Electronic Integrated Systems, 573 F.3d 1343 (Fed. Cir. 2009) (accused system works in a much different way); Zygo Corp. v. Wyko Corp., 79 F.3d 1563 (Fed. Cir. 1996) (original product infringed under doctrine but redesigned and separately patented product did not).

Fn. 058. Graver Tank & Mfg. Co. v. Linde Air Prod. Co., 339 U.S. 605, 608-609 (1950) ("where a device is so far changed in principle from a patented article that it performs the same or a similar function in a substantially different way, but nevertheless falls within the literal words of the claim, the doctrine of equivalents may be used to restrict the claim and defeat the patentee's action for infringement.").

Fn. 059. Roche Palo Alto LLC v. Apotex, Inc., 531 F.3d 1372 (Fed. Cir. 2008); Tate Access Floors, Inc. v. Interface Architectural Resources, Inc., 279 F.3d 1357, 1368 (Fed.

Cir. 2002) ("Not once has this court affirmed a decision finding noninfringement based on the reverse doctrine of equivalents.").

Compare *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 567 F.3d 1314, 1339 (Fed. Cir. 2009) ("The Supreme Court has recognized it to be a viable defense, even if it is rarely asserted.").

fn. 060. *Markman v. Westview Instruments, Inc.*, 517 U.S. 370 (1996); *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

fn. 061. E.g., *In re Am. Acad. of Sci. Tech Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).

Cf. *In re Trans Texas Holdings Corp.*, 498 F.3d 1290 (Fed. Cir. 2007) (broadest reasonable interpretation rule applicable in reexamination of a patent even though a district court had already interpreted the claim more narrowly in an infringement suit).

fn. 062. *Phillips*, 415 F.3d at 1323.

fn. 063. E.g., *Kara Technology Inc. v. Stamps.com, Inc.*, 582 F.3d 1341, 1347-48 (Fed. Cir. 2009) ("It is the claims that define the metes and bounds of the patentee's invention. ... The claims, not specification embodiments, define the scope of patent protection. The patentee is

entitled to the full scope of his claims, and we will not limit him to his preferred embodiment or import a limitation from the specification into the claims.").

fn. 064. E.g., *Trading Techs. Int'l, Inc. v. eSpeed, Inc.*, 595 F.3d 1340 (Fed. Cir. 2010).

Fn. 065. For academic commentary on Federal Circuit claim construction, see Thomas, "Claim Re-Construction: The Doctrine of Equivalents in the Post-Markman Era," 9 *Lewis & Clark L. Rev.* 153 (2005); Nard, "A Theory of Claim Interpretation," 14 *Harv. J.L. & Tech.* 1 (2000); Wagner & Petherbridge, "Is the Federal Circuit Succeeding? An Empirical Assessment of Judicial Performance," 152 *U. Pa. L. Rev.* 1105 (2004); Cotropia, "Patent Claim Interpretation Methodologies and Their Claim Scope Paradigms," 47 *Wm. & Mary L. Rev.* 49 (2005); Cotropia, "Patent Claim Interpretation and Information Costs," 9 *Lewis & Clark L. Rev.* 57 (2005).

Fn. 066. E.g., *Phillips*, 415 F.3d at 1327-28 (restricting the traditional maxim that claims should be construed to preserve their validity in relation to the prior art).

Fn. 067. E.g., *Tate Access Floors, Inc. v. Interface Architectural Resources, Inc.*, 279 F.3d 1357, 1367 (Fed. Cir. 2002) ("Fairness and the public notice function of the

patent law require courts to afford patentees the full breadth of clear claim language, and bind them to it as well.").

Fn. 068. For critical comments of a district court judge sitting by designation on the Federal Circuit, see *Trading Techs. Int'l, Inc. v. eSpeed, Inc.*, 595 F.3d 1340, 2010 U.S. App. LEXIS 3914 (Fed. Cir. 2010) (Clark, concurring)

Fn. 069. *SmithKline Beecham Corp. v. Apotex Corp.*, 403 F.3d 1331 (Fed. Cir. 2005).

Fn. 070. W. Landes & R. Posner, *The Economic Structure of Intellectual Property Law* (2003).

Fn. 071. *SmithKline Beecham Corp. v. Apotex Corp.*, 247 F. Supp.2d 1011 (N.D. Ill. 2003), *aff'd*, 403 F.3d 1331 (Fed. Cir. 2005).

Fn. 072. U.S. Pat. No. 4,721,723 (claim 1).

Fn. 073. *SmithKline*, 247 F. Supp.2d at 1027.

Fn. 074. *SmithKline*, 247 F. Supp.2d at 1027.

Fn. 075. *SmithKline*, 247 F. Supp.2d at 1029-30.

Fn. 076. *SmithKline*, 247 F. Supp.2d at 1030.

Fn. 077. *SmithKline Beecham*, 403 F.3d at 1339-40.

Fn. 078. *SmithKline Beecham*, 403 F.3d at 1340.

Fn. 079. *SmithKline Beecham*, 403 F.3d at 1341-42.

For a discussion of inherent anticipation, see Janice M. Mueller and Donald S. Chisum, "Enabling Patent Law's Inherent Anticipation Doctrine," 45 *Houston L. Rev.* 1101 (2008).

Fn. 080. *Benson*, 409 U.S. at 67.

Fn. 081. *Benson*, 409 U.S. at 67.

Fn. 082. See Chisum on Patents § 1.03[6][b].

Fn. 083. *Diehr*, 450 U.S. at 185.

Fn. 084. *Bilski*, 130 S. Ct. at 3225.

Fn. 085. For a lucid discussion of the illusive phrase "product of nature," see Justice Frankfurter's concurring opinion in *Funk Bros. Seed Co. v. Kalo Inoculant Co.*, 333 U.S. 127, 134-35 (1948) (Frankfurter, concurring: "It only confuses the issue ... to introduce such terms as 'the work

of nature' and the 'laws of nature.' For these are vague and malleable terms infected with too much ambiguity and equivocation. Everything that happens may be deemed 'the work of nature,' ....").

fn. 086. See Chisum on Patents § 1.02[7][a].

fn. 087. *Bilski*, 130 S. Ct. at 3231; *Benson*, 409 U.S. at 71.

fn. 088. *Bilski*, 130 S. Ct. at 3231.

fn. 089. In *Benson*, the Court provided a "nutshell" of its reasoning.

"It is conceded that one may not patent an idea. But in practical effect that would be the result if the formula for converting BCD numerals to pure binary numerals were patented in this case. The mathematical formula involved here has no substantial practical application except in connection with a digital computer, which means that if the judgment below is affirmed, the patent would wholly pre-empt the mathematical formula and in practical effect would be a patent on the algorithm itself."

409 U.S. at 71-72.

For a critique of this "nutshell" and other aspects of *Benson*, see Chisum, "The Patentability of Algorithms,"

47 U. Pitt. L. Rev. 959 (1986).

Fn. 090. *Bilski*, 130 S. Ct. at 3226-27.

Fn. 091. Cf. *Hasbro, Inc. v. Clue Computing, Inc.*, 232 F.3d 1 (1st Cir. 2000) (involving "Clue," the trademark for the beloved game, and clue.com).

Fn. 092. *In re Bilski*, 545 F.3d 943, 962 (Fed. Cir. 2008) (en banc), aff'd sub nom. *Bilski v. Kappos*, 130 S. Ct. 3218 (2009).

See *Cybersource Corp. v. Retail Decisions, Inc.*, 2009 U.S. Dist. LEXIS 26056 (N.D. Calif. 2009) (patent claim to credit card fraud detection; tie to internet was not sufficient because, inter alia, the internet was an abstraction).

Fn. 093. *Bilski*, 130 S. Ct. at 3225.

Fn. 094. *In re Bergy*, 596 F.2d 952, 960 (CCPA 1979), aff'd sub nom. *Diamond v. Chakrabarty*, 447 U.S. 303, 308 (1980) ("Achieving the ultimate goal of a patent under those statutory provisions involves ... having the separate keys to open in succession the three doors of sections 101, 102, and 103 ....").

Fn. 095. *In re Comiskey*, 554 F.3d 967 (Fed. Cir. 2009).

Fn. 096. In re Bilski, 545 F.3d at 951 n.1 (emphasis added).

Fn. 097. Bilski, 130 S. Ct. at 3225.

Fn. 098. Bilski, 130 S. Ct. at 3225.

Fn. 099. Bilski, 130 S. Ct. at 3225.

Fn. 100. Bilski, 130 S. Ct. at 3226.

Fn. 101. Bilski, 130 S. Ct. at 3229.

Fn. 102. Bilski, 130 S. Ct. at 3229.

Fn. 103. Flook, 437 U.S. at 596.

Fn. 104. See, e.g., Ariad Pharm., Inc. v. Eli Lilly & Co., 598 F.3d 1336, 1347 (Fed. Cir. 2010) (en banc) ("As a subordinate federal court, we may not so easily dismiss [the Supreme Courts] statements as dicta but are bound to follow them.").

Fn. 105. Bilski, 130 S. Ct. at 3225.

Fn. 106. Bilski, 130 S. Ct. at 3226.

Fn. 107. U.S. Const., Art. I, § 8, cl. 8:

"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."

It is of interest that Section 101 contains most of the key patent concepts from the Constitution, to wit, "useful" from "useful Arts," "invents" from "Inventors" and "discovers" from "Discoveries." The word "patent" in Section 101 derives from "limited Times" and "exclusive Right."

Fn. 108. In his concurring opinion in *Bilski*, Justice Stevens notes: "Numerous scholars have suggested that the term 'useful arts' was widely understood to encompass the fields that we would now describe as relating to technology or 'technological arts.'" 130 S. Ct. at (Stevens, concurring, citing, inter alia, "1 D. Chisum, Patents G1-23 (2010); Lutz, Patents and Science: A Clarification of the Patent Clause of the U.S. Constitution, 18 Geo. Wash. L. Rev. 50, 54 (1949-1950); Samuelson, Benson Revisited: The Case Against Patent Protection for Algorithms and Other Computer-Related Inventions, 39 Emory L. J. 1025, 1033, n. 24 (1990)").

Fn. 109. For a discussion of the role of "new and useful"

in Section 101, see Bergy, 596 F.2d at 560-61.

Fn. 110. In re Bilski, 545 F.3d at 960.

Fn. 111. Bilski, 130 S. Ct. at 3231.

Fn. 112. Warner-Jenkinson Co., Inc. v. Hilton Davis Chemical Co., 520 U.S. 17 (1997).

Fn. 113. Warner-Jenkinson, 520 U.S. at 40.

Fn. 114. E.g., Wavetronix, LLC v. EIS Electronic Integrated Systems, 573 F.3d 1343 (Fed. Cir. 2009); Riles v. Shell Exploration & Production, 298 F.3d 1302, 63 USPQ2d 1819 (Fed. Cir. 2002).

Fn. 115. The Federal Circuit was created in 1982, in part, to bring "doctrinal uniformity" to patent law. Patent appeals previously went to the various regional circuits, which had shown considerable propensity to take differing positions when evaluating patents. See House Rep. No. 97-312, 97th Cong., 1st Sess. 20-23 (1981) ("Even in circumstances in which there is no conflict as to the actual rule of law, the courts take such a great variety of approaches and attitudes toward the patent system that the application of the law to the facts of an individual case produces unevenness in the administration of the patent

law. ... A single court of appeals for patent cases will promote certainty where it is lacking to a significant degree and will reduce, if not eliminate, the forum-shopping that now occurs.").

Perhaps not sufficiently appreciated in 1981 was that a multi-judge intermediate appellate court such as the Federal Circuit, which would use separate panels of three and five judges regularly, and which would be considering, sometimes simultaneously, nearly the same legal issues, would likely develop "intra-circuit" panel conflicts that were as severe and serious as the previous "inter-circuit" conflicts.

In one of its earliest major decisions on patent claim scope, the Federal Circuit judges, sitting en banc, split 5-1-5. *SRI International v. Matsushita Electric Corporation of America*, 775 F.2d 1107 (Fed. Cir. 1985) (en banc). For a discussion of *SRI International*, see Chisum on Patents § 18.03[1][d][ii].

Fn. 116. Merges & Nelson, "On the Complex Economics of Patent Scope," 90 Colum. L. Rev. 839 (1990).

Fn. 117. Cf. *Eli Lilly v. Zenith Goldline Pharmaceuticals*, 2001 U.S. Dist. LEXIS 18361 \*33 (S.D. Ind. 2001) ("William of Ockham was a fourteenth century English Franciscan philosopher. He formulated his 'razor' in different ways. One read: non sunt multiplicanda entia

praeter necessitatem—one should not multiply the number of entities unnecessarily. Applied more broadly, his 'razor' declares that a simpler explanation is preferable to a more complex one, all other things being equal.").

See also *Louisiana Workers' Compensation Corp. v. Louisiana Insurance Guaranty Ass'n*, 20 So.3d 1047, 1059 n.13 (La. Ct. App. 2009) ("The venerable philosophical principle known as 'Occam's razor' is not a formal rule of statutory construction, but has often been cited by courts in reaching logical results. See, e.g., *Justiss Oil Co., Inc. v. Kerr-McGee Ref. Corp.*, 75 F.3d 1057, 1061 n.10 (5th Cir. 1996) ('Occam's, or Ockham's, razor has been defined as "the philosophic rule that entities should not be multiplied unnecessarily." '), and *Alabama-Tennessee Natural Gas Co. v. Fed. Power Comm'n*, 359 F.2d 318, 335 (5th Cir. 1966) ('Occam's razor slices through the arguments based on legislative history and congressional intent.')."

fn. 118. *Bilski*, 130 S. Ct. at 3239-52 (Stevens, concurring).

fn. 119. *Bilski*, 130 S. Ct. at 3253-57 (Stevens, concurring).

fn. 120. See, e.g., Nicholas Fox and Alex Rees, "A European Perspective on Business Method Patents," *LANDSLIDE* (July/Aug. 2010), at 30-37; Alexandra

Wilson, "Business Method Patents Gone Wild: Narrowing State Street Bank and Shifting to a European Perspective," 12 J. Tech. L. & Pol'y 71 (2007).