

# FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT MATTER

EMILY MICHIKO MORRIS\*

## *Abstract*

The Supreme Court's recent decision in *Bilski v. Kappos* left many just as confused as they were before on just what constitutes patentable subject matter. This comes as no surprise, however, for issues of patentable subject matter are thorny and have plagued the courts since the inception of U.S. patent law. Part of the problem is that patent law is a one-size-fits-all system that covers not only a wide diversity of scientific and technological areas but also areas whose continued evolution the patent system itself is designed to incentivize. Enunciating patentable subject matter guidelines that address these ever-changing developments with an even but predictable hand presents obvious difficulties.

Indeed, the Court's decision in *Bilski* left many particularly frustrated, for it seemed to disavow any hard and fast rules or linguistic tests for distinguishing patentable from unpatentable subject matter. Instead, the Court relied on what seems to be nothing more than intuition. Patentable subject matter is like obscenity, to some extent – we know it when we see it. Search *Bilski* high and low for a neat delineation of what is patentable subject matter and all you will find is the various justices' conviction that, whatever the proper definition of patentable subject matter may be, the business method at issue in *Bilski* "clearly" did not qualify. In the end, then, it is perhaps this largely intuitive nature that makes patentable subject matter so difficult to define.

---

\* Associate Professor and Dean's Fellow, Indiana University Robert H. McKinney School of Law, Indianapolis, IN. Many thanks to the faculty of the Chase College of Law at Northern Kentucky University, and to the participants of the 10th Annual Intellectual Property Scholars Conference at the Berkeley Center for Law & Technology in Berkeley. Special thanks to Elisa Doll, Katie Haire, and Morgan Lincoln, Indiana University School of Law – Indianapolis, for their exceptional research assistance.

## FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT MATTER

Perhaps by directly acknowledging the fundamentally intuitive basis of patentable subject matter, however, we can still cull some general principles to guide us. Indeed, the case law on patentable subject matter exhibits a number of recurring themes. The two themes that seem most consistently to characterize our intuitions on patentable subject matter are the concepts of “artifice” combined with “function.” “Artifice” refers to some level of human intervention or adaptation beyond natural or spontaneous phenomena. “Function” refers to operation toward some humanly appointed purpose. By focusing on these two referents, we can understand much of what has driven subject matter restrictions over the history of patent law.

Of course, “function” and “artifice” are themselves somewhat malleable concepts that tend to lie along a spectrum. As such, they can often become difficult to apply in any given context. Nevertheless, in focusing more directly on these two concepts, rather than on other linguistic approximations of them, we perhaps clarify – as much as possible – what qualifies as patentable subject matter in a way that will allow us better to adapt to new technologies. We may lose something at the margins in doing so, particularly with regard to how best to incentivize further innovation, but perhaps at least the law will be more transparent and reliable in exchange.

### I. INTRODUCTION

The Supreme Court’s recent decision in *Bilski v. Kappos*<sup>1</sup> left many just as confused as they were before on just what constitutes patentable subject matter. This comes as no surprise, however, for issues of patentable subject matter are thorny and have plagued the courts since the inception of U.S patent law. Part of the problem is that patent law is a one-size-fits-all system that covers not only a wide diversity of scientific and technological areas but also areas whose continued evolution the patent system itself is designed to incentivize. Enunciating patentable subject matter guidelines that address these ever-changing developments with an even but predictable hand presents obvious difficulties.<sup>2</sup>

---

<sup>1</sup> \_\_\_ U.S. \_\_\_ (2010).

<sup>2</sup> [various]

## FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT MATTER

Indeed, the Court's decision in *Bilski* left many particularly frustrated, for it seems to leave the patent community with even less guidance coming out of the decision than it had going in. For one thing, the Court appeared to disavow any hard and fast rules or linguistic tests, other than the rather brief text of § 101 of the Patent Act, for distinguishing patentable from unpatentable subject matter. Instead, the Court relied on what seems to be nothing more than intuition. Patentable subject matter is like obscenity, to some extent – we know it when we see it. Search *Bilski* high and low for a neat delineation of what is patentable subject matter and all you will find is the various justices' conviction that, whatever the proper definition of patentable subject matter may be, the business method at issue in *Bilski* "clearly" did not qualify. In the end, then, it is perhaps our intuitive approach to patentable subject matter that makes it so difficult to define.

Perhaps by directly acknowledging the fundamentally intuitive basis of patentable subject matter, however, we can still cull some general principles to guide us. Indeed, the case law on patentable subject matter exhibits a number of recurring themes. The two themes that seem most consistently to characterize our intuitions on patentable subject matter are the concepts of "artifice" combined with "function." "Artifice" refers to some level of human intervention or adaptation beyond natural or spontaneous phenomena. "Function" refers to operation toward some humanly appointed purpose. By focusing on these two referents, we can understand much of what has driven subject matter restrictions over the history of patent law.

Of course, "function" and "artifice" are themselves somewhat malleable concepts that tend to lie along a spectrum. As such, they can often become difficult to apply in any given context. Nevertheless, in focusing more directly on these two concepts, rather than on other linguistic approximations of them, we perhaps clarify – as much as possible – what qualifies as patentable subject matter in a way that will allow us better to adapt to new technologies. We may lose something at the margins in doing so, particularly with regard to how best to incentivize further innovation, but perhaps at least the law will be more transparent and reliable in exchange.

Overall, the case law on patentable subject matter appears to revolve around a few recurring themes. First among these is the fear of granting patents so broad that they in fact deter, rather than

## FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT MATTER

incentivize, further innovation. Second, and closely related to the first, is fear of patenting inventions that lack of more or less immediate practical application and are therefore seen as too inchoate to be warrant patenting. Third, although perhaps less prevalent, is the fear that granting patent rights over some types of matter would allow propertization of that which ought not to be propertized – or at least, not propertized through patenting.

To address these and other concerns, the courts and the USPTO have long attempted to hew to the long-venerated but elusive divide between patentable processes, machines, manufacturers, and compositions of matter from unpatentable laws of nature, physical phenomena, and abstract ideas.

but somewhat vague – how define these?

Therefore variously relied on an ever-changing array of tests for patentable subject matter, such as the machine-or-transformation test, the printed-matter and new-machine doctrines, and more.

Upon closer examination, however, all these disparate pieces of the patentable subject matter puzzle do not quite add up to a unified .

Some seem to devolve into the other patentability requirements – primarily novelty, non-obviousness, utility, and enablement.

Many have now fallen into disuse as ill-suited to address more difficult areas of patentable subject matter, such as business methods, computer software, and medical diagnostic methods.

Underneath all this equivocating over the proper test for distinguishing patentable from unpatentable subject matter, however, seems to be a comparatively

fundamental intuition about what should be patentable. Patentable subject matter is like obscenity, to some extent – we know it when we see it. *Bilski v. Kappos* as prime example – search high and low for neat delineation of what is patentable subject matter and all you'll get is the various justices' more-or-less instinctual conviction that, at the very least, the business method at issue in the case did not qualify.

And, indeed, our intuitions are often difficult to put into words. . As is true of many such tacit conceptions of law, the various legal tests that we devise to express those intuitions are often only approximations – mere intimations, really – of why we believe to be the correct answer to any given legal question. Courts

## FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT MATTER

have tried with MOTT test, but as the Court in *Bilski* pointed out, while useful, MOTT doesn't get us there. Such attempts inevitably fail fully to reflect our intuitions in all cases of doubtful subject matter.

The use of approximations itself is non-controversial, for we use them all the time in the law, particularly where direct evidence of what we are looking for is not readily available.

Yet even the most closely crafted approximation serves its purpose only if that purpose is well-defined. What is this intuition about constitutes patentable subject matter, and why does patenting some types of innovation clearly make us uncomfortable? In the end, it is perhaps the ineffable nature of this intuitive sense that makes patentable subject matter so difficult to delineate.

This article suggests that the intuition underlying much of the law on patentable subject matter can be roughly summarized as distinguishing that which combines both function and artifice. "Function" refers to some action for which a thing is specially adapted; "artifice" refers to that quality of ingenuity or artificiality that precludes natural or spontaneous existence. By focusing on these two referents, we see much of what drives patentable subject matter restrictions. Perhaps more importantly, however, by focusing on both "function" and "artifice," we can also clarify – as much as possible – what patentable subject matter means while still allowing the patent system to adapt to the constantly moving target that is the "useful Arts." We will likely lose something at the margins in doing so, particularly with regard to how best to incentivize further innovation, but perhaps at least the law will be more transparent and reliable in exchange.

### II. WHAT PATENTS PROTECT

- A. Constitutional mandate to promote progress in useful Arts must be distinguished from constitutional mandate to promote progress in Science
  - B. I.e., must distinguish patent from copyright
    - 1. And must be something that will "promote progress"

**FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT  
MATTER**

- C. So how do we do this?
1. Eliminate some things as just not propertizable or commodifiable
    2. E.g., humans, human organisms (under Leahy-Smith, EU law)
    3. Also, however, things that are human activities? E.g., perhaps, tax methods under Leahy-Smith? More below
    4. Also perhaps underlies concerns about involuntary infringement?
    5. Also perhaps underlies concerns about patenting purely human activity?
    6. Also, previously, concerns about living organisms, genetics, etc.
    7. (This is why beneficial utility used to have more bite? More below)
  8. Eliminate those things that are propertizable but fall under other categories of propertizable intellectual goods
    9. I.e., distinguish copyright, trademark, and trade secrecy (and perhaps other types of property such as rights of publicity) [FN? Intangible v. tangible property, intellectual goods, etc.]
    10. Perhaps because each type of intellectual property:
      11. Has different goals?
      12. Provides different types of protections more suited to the nature of the subject matter protected?
      13. Is more likely to “promote progress” (or its analog, for trademark & trade secrecy) based on the nature of the subject matter protected?
      14. I.e., given the different means of protecting things provided by each type of intellectual property regime, we want to be careful to distinguish between the various kinds of subject matter protected under each

**FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT  
MATTER**

15. And if nothing else, want clarity and certainty
16. Eliminate those things that, even if they otherwise seem to fit within the rubric of the “useful Arts,” will not “promote progress” if propertized
  17. Often revolves around ripeness or completeness of the concept
  18. Risks pre-emption of an entire field if too far upstream – i.e., counter-intuitively, the more complete the concept, the narrower its penumbra
  19. Risks leaving the work for others, skewing the incentives to invest in that work and robbing the public of the full benefit of the concept if no one ever complete the work
  20. Not, however, necessarily about what is immediately economically valuable, as vast majority of patents are commercially valueless, while many unpatentable ideas are economically quite valuable
  21. Thus, what promotes progress in useful Arts not necessarily what is profitable?
  22. I.e., what patent system promotes is “useful Arts,” which is not same as “profitable Arts”
  23. This has implications for business methods – i.e., suggests that they should not be patentable simply because they are valuable and their “inventors” want exclusivity (much like information, clinical trials data, etc.)
  24. But does have implications for basic research, scientific discoveries, etc., although this perhaps less a patentable subject matter issue and more a ripeness (enablement, etc.) issue?

## FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT MATTER

### III. ARTIFICE & FUNCTION UNDERLYING OUR INTUITIONS

#### ABOUT PATENTABLE SUBJECT MATTER

- A. “Technology” and the “useful Arts”
1. Our intuition reflects our constitutional mandate only to protect that which promotes the progress of the useful Arts
    - a) Article I, Section 8, authorizing Congress “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.”
  2. What is “technology” or “useful Arts”?  
More to the point, what underlies our intuitions about what “technology” and “the useful Arts” are?
    - a) Artifice
    - b) Function
      - (1) Overlap with enablement, specific & substantial utility in weeding out “abstract ideas”
      - (2) Perhaps not a separate requirement in addition to artifice?
      - (3) But also reflected in *Nuijten*
    - c) Indeed, lots of overlap with other patentability requirements, although artifice (+ function?) still do some work on their own, as show in examples below
      - (1) E.g., other patentability requirements would not weed out phenomena of nature, perhaps not human activity
- B. Artifice + function as reflected in the various patentable subject matter doctrines over the years
1. Printed matter doctrine
    - a) Functionality avoid patenting pure information
  2. Mental steps doctrine
    - a) Concerns about commodification of human activity, particularly human thought
    - b) E.g., involuntary infringement, enslavement, First Amendment, etc.



**FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT  
MATTER**

- c) Artifice test refers to artificiality of something other than human activity?
- d) I.e., human activity by definition “artificial” or “natural”?
- 3. Point of novelty test
- 4. Technological arts doctrine
  - a) Concerns about commodification of human activity, although less concerning when not human thought
- 5. New machine doctrine
- 6. Freeman-Walter-Abele test
  - a) “Freeman-Walter-Abele test was designed by the Court of Customs and Patent Appeals, and subsequently adopted by this court, to extract and identify unpatentable mathematical algorithms in the aftermath of *Benson and Flook*. See *In re Freeman*, 573 F.2d 1237, 197 U.S.P.Q. (BNA) 464 (CCPA 1978) as modified by *In re Walter*, 618 F.2d 758, 205 U.S.P.Q. (BNA) 397 (CCPA 1980). The test has been thus articulated: ‘First, the claim is analyzed to determine whether a mathematical algorithm is directly or indirectly recited. Next, if a mathematical algorithm is found, the claim as a whole is further analyzed to determine whether the algorithm is “applied in any manner to physical elements or process steps,” and, if it is, it “passes muster under § 101.” ‘ *In re Pardo*, 684 F.2d 912, 915, 214 U.S.P.Q. (BNA) 673, 675-76 (CCPA 1982) (citing *In re Abele*, 684 F.2d 902, 214 U.S.P.Q. (BNA) 682 (CCPA 1982)). After *Diehr* and *Chakrabarty*, the Freeman-Walter-Abele test has little, if any, applicability to determining the presence of statutory subject matter. As we pointed out in *Alappat*, 33 F.3d at 1543, 31 U.S.P.Q.2D (BNA) at 1557, application of the test could be misleading, because a process, machine, manufacture, or composition of matter employing a law of nature, natural phenomenon, or abstract idea is patentable subject matter even though a law of nature, natural phenomenon, or abstract idea would not, by itself, be entitled to such protection.<sup>6</sup> The test determines the presence of, for example, an algorithm.”<sup>3</sup>
- 7. “Useful, concrete, and tangible” test
- 8. MOTT

---

<sup>3</sup> State Street Bank

## FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT MATTER

- a) Most if not all technology/useful Arts require some human intervention/activity beyond the artifice needed to devise the inventive concept in the first place. Thus, can't simply tie subject matter to whether a human could perform part or all of the invention (e.g., mental steps doctrine).
- b) But if the inventive concept is solely a human performing some action (e.g., sports moves, arbitration methods, etc.), should that be patentable?

### IV. HOW ARTIFICE & FUNCTION TEST CAN ADDRESS BUSINESS METHODS, COMPUTER SOFTWARE, DIAGNOSTIC METHODS, NUIJTEN, GENETICS?

For example, if we take fears of patent over-breadth or lack of practical application at face value, patents on computer software, business methods, or even so-called pioneering inventions make no sense, and yet the law (now) clearly allows patents on all three categories of innovation.

-The Federal Circuit's *Bilski* decision adopted a "machine-or-transformation" test for patentable processes, but the court recognized that in doing so, it was adopting what is merely a proxy for a more integral but nebulous concern – how to prevent patents that would "preempt the use of a fundamental principle."

-Many of even the most seminal decisions on patentable subject matter seem more to be decision on other patentability requirements – novelty, non-obviousness, utility, and so on – merely masquerading as decisions about what subject matter should be protected under patent law. Indeed, many scholars have asserted that patentable subject matter is merely a proxy for other patentability requirements such as non-obviousness, enablement, and utility. The Supreme Court's recent decision in *Bilski v. Kappos* illustrates this point exactly. When asked whether business methods are patentable subject matter, the Court . . . .

Perhaps the best answer to these questions is to stop asking them. We could instead simply accept that patentable subject matter requirements are not so much approximations for

## FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT MATTER

underlying intuitions that have yet to be identified clearly but rather are themselves the defining concepts that simply express what we *hope* the patent system will achieve. If this more realist (deterministic?) view of patent law bears weight, maybe we should focus on . . . .

-Given this reality, moreover, the Supreme Court's refusal in *Bilski* to endorse (or eliminate) any one linguistic test for patentable subject matter also comes as no surprise. How can a court identify the proper test when we can even figure out exactly what intuition that test is supposed to express?

-patentability of algorithms, abstract ideas, and "other phenomena of nature"

### **machine-or-transformation test**

Federal Circuit's *Bilski* decision's "machine-or-transformation" test – arguable expansion on physicality test. Indeed, court recognized that test merely proxy for "preempt the use of a fundamental principle" – which, as majority itself later admits, is merely proxy for (sign or symptom of) unpatentable s-j. But ill-fit – physicality requirement restricts further than just preventing preemption of fundamental principles. Otherwise, mere field-restrictions or token physical steps often (extra-solution activity for algorithms) would be enough for patentability, for even if merely "token," they at least restrict application of the principle or algorithm to the field or extra-solution activity specified.

So what are we trying to identify by machine-or-transformation? Perhaps both physicality and "technology" are merely buzzwords for "practical application" – i.e., *specific and substantial utility*? But unlikely – otherwise "useful, concrete, & tangible result" test made famous in *State Street* would still obtain

Or, as is more likely, is machine-or-transformation test a way of restating "technical" or technology? I.e., only physical results or means are "technical"? But, patents are on "inventive concepts," not physical embodiments thereof. As says in *The Telephone Cases*: "The patent for the art does not necessarily involve a patent for the particular means employed for using it. Indeed, the mention of any means, in the specification or descriptive portion of the patent, is only necessary to show that the art can be used; for it is only useful arts — arts which may be used to advantage — that can be made the subject of a patent." (Thus allowing Bell rather broad claim on undulating electrical current to

## FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT MATTER

convey sounds over distances. But at least Bell was claiming physical means – undulating electrical current – to achieve physical result – reproduction of sound waves.)

This in turn suggests concerns about enablement and whether the patent applicants have enabled all of the patent breadth they are claiming so as to give it practical application. Thus, perhaps requiring physicality – embodiment of inventive concept in physical form – is way of demonstrating enablement. But does enablement necessarily mean physicality, either in means or results?

And while physicality certainly could help protect against overbreadth, seems rather arbitrary way to do so. And again, there are other ways to narrow patent scope/prevent preemption of fundamental principles – e.g., field restrictions, etc. But courts have routinely rejected such seemingly token ways of narrowing patent breadth, suggesting a more fundamental intuition about what is & isn't patentable subject matter?

But with regard to computer software performing mathematical or other algorithms or business methods: These are practical in application – i.e., possess specific & substantial utility. I.e., we can call them “practically applied Arts.” But they aren't “technological” as such, at least not in and of themselves? Why? Are we – more or less arbitrarily – giving “technological” a specific, more narrow definition for patent law purposes? As Judge Rader noted in his dissent in *Bilski*, “technical” or “technology” are ambiguous terms that change as they advance. [“Technology:” “practical application of knowledge, especially in a particular area;” manner of accomplishing a task, especially using technical processes” (“technical:” “especially of a mechanical *or scientific* subject”) – this definition conceded by *Bilski* at oral argument before Court.]

Merely trying to illustrate how physicality may serve as an imperfect proxy for a variety of concerns we have about patentable s-j. I.e., we're concerned about overbreadth in all its forms – lack of enablement, preclusion of future use by others, etc. [These concerns, in turn, all seem to come down to transaction costs and distribution of wealth created by innovations. Thus, when we look at our concerns over patent overbreadth, transaction costs, and capture of returns on innovations, as well as the overall purpose of patent law – to incentivize innovation and foster disclosure of those innovations,] it's not clear that our current patentable s-j

## FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT MATTER

matter tests truly get at these larger concerns. For example, I'm not sure that the machine-or-transformation test – or indeed, exclusions of abstract ideas, laws of nature, and algorithms – helps us in any meaningful way identify what areas of innovation – or even individual innovations – that would not have been created if not for the patent system.

### **abstract ideas**

Instead, Judge Rader would have called Bilski's business method "abstract idea." Although seems to beg question – why "abstract"? Bell's idea seems fairly "abstract," as would most "inventive concepts" divorced from their embodiments.

"Abstract" suggests to me either no practical application (again, begging question of what it means to have "practical application") or not adequately enabled. This in turn suggests fear of patent scope overbreadth – i.e., the patentee has claimed patent scope over too broad an idea, perhaps because the full use or application of that idea has not been fully enabled or even identified, the latter being a case of lack of utility.

Similarly, Stevens dissent in *Bilski* finds it hollow to hold the business method at issue was merely an abstract idea. The method at issue did point out how to select certain data and how to analyze them, and that this makes it more concrete and less abstract. dissent at 3235. But this still doesn't solve the problem of distinguishing the hedging method from an algorithm? I.e., the adjective "abstract" tells us nothing, and even if it did, abstraction surely lies along a spectrum and is not a discontinuous variable

And how do we reconcile our treatment of "abstract ideas" with our treatment of pioneering inventions? E.g., invention of the internal combustion engine made possible a number of new inventions that made use of the engine as a power source. Kohler & Millstein's pioneering hybridomas made possible a number of other inventions. Nonetheless, neither the internal combustion engine nor the hybridoma (which wasn't patented, of course) enabled – that is taught how to make and use – these later inventions based on these pioneering inventions. Rather, subsequent inventors had to experiment to invent improvements on or incorporations of the internal combustion engine or hybridoma technology. Similarly, those wishing to embellish on would have to do their own further experimentation. [Morse's pioneering idea of using "the motive power of the electric of galvanic current . . .

## FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT MATTER

however developed for marking or printing intelligible characters, signs, or letters, at any distances” was noted as an unpatentable “principle” because he had not enabled others to achieve such effect reliably.] So what, as a matter of law, separates pioneering inventions from abstract ideas – or even basic scientific research, discoveries of laws of nature, etc. – at least in terms of patent breadth? Merely physicality? Or full enablement, for which physicality might be one proxy? Or full identification of specific & substantial utility, again for which physicality might serve as a proxy? This sounds right intuitively, but how do we put that intuition into words that provide a principled basis for deciding cases at the margin, such as business methods & computer algorithms? Nothing new here, same metaphysical arguments that many have made before.

### **not about incentives, either**

Also, patentable s-j rules don’t seem to address innovations that, even once created, would not be developed, commercialized, or otherwise adapted for widespread use by society.

This latter concern, to my mind, is a separate one from whether innovation will be created in first place, particularly as industries & areas of technology mature and become more competitive, as network effects lock in, etc.

We can make lots of arguments about what incentives various industries have to innovate, but much of this is empirical and not – at least at this point – clearly correlated with our patentable s-j rules

Moreover, as Arti Rai and others have pointed out, laws & norms influence one another, even in patent law and science & technology

Or, if we are concerned about innovators at the margins of patentable s-j – and perhaps we should be –

For example, currently have created some gaps between copyright & patent law, leaving them in a sort of limbo

Perhaps creating abuses in attempts to shoehorn ideas & concepts into one or the other areas of IP protection

Maybe all these proxies were rough statements of what little we can agree on in terms of what should and should not be patentable, but other than that, we have no clear idea of what should be patentable and certainly no real consensus on the issue.

## FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT MATTER

Or maybe we're just not sure how to put into words what we understand intuitively.

### **new & useful**

-ar·ti·fi·cial

1 : humanly contrived often on a natural model : man-made  
<an artificial limb> <artificial diamonds>

2 a : having existence in legal, economic, or political theory  
b : caused or produced by a human and especially social or political agency <an artificial price advantage> <artificial barriers of discrimination — R. C. Weaver>

3 obsolete : artful, cunning

4 a : lacking in natural or spontaneous quality <an artificial smile> <an artificial excitement> b : imitation, sham <artificial flavor>

5 : based on differential morphological characters not necessarily indicative of natural relationships <an artificial key for plant identification>

-ar·ti·fice

1 a : clever or artful skill : ingenuity <believing that characters had to be created from within rather than with artifice — Garson Kanin> b : an ingenious device or expedient

2 a : an artful stratagem : trick b : false or insincere behavior <social artifice>

synonyms see trick, art

-ar·ti·fact

1 a : something created by humans usually for a practical purpose; especially : an object remaining from a particular period <caves containing prehistoric artifacts> b : something characteristic of or resulting from a particular human institution, period, trend, or individual <self-consciousness...turns out to be an artifact of our education system — Times Literary Supplement>

2 : a product of artificial character (as in a scientific test) due usually to extraneous (as human) agency

“The Court's precedents provide three specific exceptions to § 101's broad patent-eligibility principles: ‘laws of nature, physical phenomena, and abstract ideas.’ Chakrabarty, *supra*, at 309, 100 S. Ct. 2204, 65 L. Ed. 2d 144. While these exceptions are not required by the statutory text, they are consistent with the notion that a patentable process must be ‘new and useful.’” *Bilski v. Kappos*, majority at 3226.

## **FUNCTION, ARTIFICE, AND INTUITION IN PATENTABLE SUBJECT MATTER**

### **ramifications**

We can continue to liberalize patentable s-j matter but deal with our concerns in other ways

E.g., if we're concerned about patent overbreadth and transaction costs, we can employ various compulsory-licensing types of schemes, including more lenient experimental use or fair use exceptions

(These latter are effectively compulsory licenses at with no returns for the patentee)

E.g., Sections 287(c) for medical diagnostic & treatment patents

And isn't this more a question of definite claiming?

### **LOOK UP**

-“technology” v. “useful Arts” and Fed. Cir.’s disapproval of “technology”

### **MORGUE**