An Initial Comment on *In re Bilski*: Tangibility Gone Meta

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In its recently issued *en banc* majority opinion in *In re Bilski*, the Federal Circuit articulates a "machine-or-transformation" test for patent-eligible subject matter under § 101 of the Patent Act. Although they are both legitimate questions, this short comment addresses neither whether there is a legitimate statutory basis for this test nor whether Supreme Court precedent should be interpreted so as to mandate (or even support) this test. Rather, it focuses solely on the criteria that the court offers to draw the line between patentable and unpatentable transformations. The Federal Circuit has added a new twist to the tangibility test that has for many years played a role in determining patent-eligibility: the tangibility test has gone "meta." The tangibility of the formal data that is actually transformed by a method of processing information is not relevant to patent-eligibility, but the tangibility of the things that the data is about—the tangibility of the informational content of the data or the things to which the data refers—now appears to be dispositive.

Bilski sets out a disjunctive two-prong "machine-or-transformation" test for patent-eligible subject matter: "A claimed process is surely patent-eligible subject matter under § 101 if: (1) it is tied to a particular machine or apparatus, *or* (2) it transforms a particular article into a different state or thing." Slip op. at 10. The opinion declines to elaborate on the implications of the particular-machine prong of the test because the applicants conceded that their claim did not satisfy this prong. *Id.* at 24. It addresses only the transformation prong. It puts forward a conjunctive, two-prong test that must be satisfied for a method to "transform[] a particular article into a different state or thing" and thus to qualify as patent-eligible subject matter. First, the transformation implicated "must be central to the purpose of the claimed process." *Id*. In other words, it must also "impose meaningful limits on the claim's scope" and not "be insignificant extra-solution activity." *Id.* Second, the transformation only qualifies as patent-eligible if it transforms a certain type of "article." "[T]he main aspect of the transformation test that requires clarification here is what sorts of things constitute 'articles' such that their transformation is sufficient to impart patent-eligibility under § 101." *Id.* at 24–25. This is the distinction—the distinction between the "articles" that, if transformed, constitute patent-eligible subject matter and the other "articles" that, if transformed, do not constitute patent-eligible subject matter—on which the opinion elaborates at length, *id.* at 25–32, and on which this comment focuses.

Most importantly for the point addressed here, the Federal Circuit implies in *Bilski* that there are two different categories of "electronically-manipulated data," *id.* at 25, and that the data in each category is a different type of "article" insofar as patent-eligibility is concerned. The data in the first category is an "article" that, if transformed by a method claim, constitutes patent-eligible subject matter, but a method that transforms the data in the second category is not a patent-eligible method.

The first category is comprised of data that represents a "physical object or substance." *Id.* at 28. For example, citing *In re Abele*, 684 F.2d 902 (C.C.P.A. 1982), the Federal Circuit stated that a method that transforms data that "clearly represent[s] the physical and tangible objects, namely the structure of bones, organs, and other body tissues" is a patent-eligible method. Slip. op. at 26.

The second category of data seems to have two distinct subsets. The first subset is data that, as claimed, does not represent anything (or, alternatively, that can represent anything). This data is semantically empty; it is a variable without any specified informational content. *Bilski* again uses *Abele*—but this time the claims that the court rejected under § 101—as an example. *Id.* The fact that methods reciting the transformation of this meaningless (or infinitely meaningful) data are not patent-eligible should come as no surprise to those familiar with the history of patent-eligibility in the last several decades: methods that recite the manipulation of variables without semantic meaning are nothing more than methods that recite mathematical algorithms in the abstract.

The second subset of the second category, however, is likely to raise some eyebrows: it contains data that represents something specific or something in particular, but that something represented is itself intangible. Here, the informational content of the data—the thing in the world to which the data refers—is intangible. The Federal Circuit holds that the method at issue in *Bilski* is not patent-eligible because it "transform[s]" or "manipulat[es]" data representing "public or private legal obligations or relationships, business risks, or other such abstractions," which critically is not data "representative of physical objects or substances." *Id.* at 28.

The idea that the meaning that the user attributes to the data transformed or manipulated by an information processing method is relevant to patent-eligibility is not a novel feature of the "machine-or-transformation" test announced in *Bilski*. For example, the "concrete, useful and tangible result" test of *State Street Bank* required the courts to examine the meaning of the data, variables or "numbers" in the course of determining patent-eligibility. *State St. Bank & Trust Co. v. Signature Fin. Group*, 149 F.3d 1368, 1373–75 (Fed. Cir. 1998). However, what is new in *Bilski* is the importance now placed on the physicality of the thing to which the data refers. Thus, the tangibility test has gone "meta": it is no longer the tangibility of jostling electrons that is of concern (as it was in the early days of patents on computer-executed information processing methods), but the tangibility of the stuff represented by those electrons-as-symbols. In the language of semiotics, the tangibility analysis has shifted from a concern about the tangibility of the signifier—the physical configuration of matter that forms a symbol—to a concern about the tangibility of the signified—the informational content of or the thing represented by the symbol.

There is in my opinion much that needs to be said about this move in *Bilski* that takes the long-standing concern about tangibility in the patent-eligibility analysis "meta,"

transforming it from a concern about a signifier to a concern about a signified. Here, however, I limit myself to raising two initial, narrow questions.

First, the move raises a normative question: Why should we treat information about tangible things in a manner that is categorically different from the manner in which we treat information about intangible things? Having taken its cue from the Supreme Court, the Federal Circuit clearly wants to prevent patent-eligible method claims from pre-empting mathematical "fundamental principles." Slip op. at 26. However, the most appropriate means to achieve this end would seem to be a focus on the specificity, not the intangibility, of what is meant. Why should the manipulation of data that represents my height (a presumptively physical property of my body) be patentable, yet the manipulation of data that represents my expected longevity (a property that is difficult to classify as a physical one) be unpatentable?

Second, the move raises concerns about administrability. Is data about my expected longevity about something physical, namely my body? If it is, then why isn't the data at issue in *Bilski* also about something tangible? The data is after all about a property of lumps of coal, namely their expected future rate of consumption or the legal rights that individuals have with respect to them. Or, to formulate the administrability problem in a recursive manner, what about data that is about the structural qualities of electronic signals? To determine whether a method that manipulates such data is patent-eligible, it would seem again to be necessary to confront the tangibility of an electronic signal—the very question that patent doctrine has been trying to render irrelevant for several decades—but this time with the signal as a signified rather than as a signifier.