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The Gatekeeping Function of Patent Eligibility as Part of a More Complete Understanding of § 101 Principles

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From a review of the opinions expressed in the majority decision and rehearing denial in *Ariosa Diagnostics, Inc. v. Sequenom, Inc.*, 788 F.3d 1371, *reh'g en banc denied*, 809 F.3d 1282 (Fed. Cir. 2015), *petition for cert. filed* (No. 15-1182, Mar. 21, 2016), and in the briefs filed by various parties in relation to Sequenom Inc.'s petition for writ of *certiorari*, we can see several different viewpoints emerge with respect to the case. Some express the viewpoint that the case reached the wrong outcome, either because the Court (a) misunderstood the facts relating to the invention or patent, (b) misapplied existing § 101 principles, or (c) both. Others express the viewpoint that the case reached the right outcome, either because the Court (a) correctly applied § 101 principles, or (b) incorrectly did so but would have reached the same outcome under a correct analysis. And there are also some who express the viewpoint that the case correctly applied current § 101 eligibility principles but still reached a wrong outcome, such that § 101 requires a serious overhaul, or should be done away with altogether as a patentability criterion. In this article, we do not take a position on any of these viewpoints. Rather, we write to shed more light on the gatekeeping function of patent eligibility which we see permeating judicial decisions on § 101, making it worthy of careful contemplation when considering any one of the positions expressed above.

Analysis of § 101 patent eligibility generally involves discourse using the term "preemption." The Supreme Court, for example, has described preemption as driving the exclusionary principle under § 101. *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 134 S.Ct. 2347, 2354 (2014); *see also Mayo Collaborative Services v. Prometheus Labs. Inc.*, 132 S.Ct. 1289, 1294 (2012) ("[Our precedents] warn us against upholding patents that claim processes that too broadly preempt the use of a natural law."). But, at the same time, we see in the cases that *complete* preemption by a patent claim—in the sense of a claim so broad it just recites an abstract idea or natural phenomenon—has not been the *sine qua non* of patent ineligibility. For example, we have seen the Supreme Court reject eligibility arguments that merely contend that the claim in fact recites some physical

structure, and so does not completely preempt the underlying abstract idea or natural phenomenon itself (putting aside for the moment what that structure is). The late Chief Judge Archer explained why such arguments are unsatisfactory in a dissent he authored over twenty years ago in *In re Alappat*, 33 F.3d 1526 (Fed. Cir. 1994), in which he opposed the patentability *per se* of a mathematical algorithm just because the claim referenced generic computing structures. His reasoning was strikingly similar to that appearing more recently in *Mayo*. As Chief Judge Archer observed, if patent eligibility was necessarily satisfied by reciting any physical structure, then *Diamond v. Diehr* would have been a much shorter opinion, and *Flook* and *Benson* would have come out the other way. *Alappat*, 33 F.3d at 1557. *Alice* too would have come out the other way, since some of the claims there recited generic computing structures. See *Alice*, 134 S.Ct. at 2358-59 (“There is no dispute that a computer is a tangible system (in § 101 terms, a ‘machine’) . . . [b]ut if that were the end of the § 101 inquiry, an applicant could claim any principle of the physical or social sciences by reciting a computer system configured to implement the relevant concept.”).

A way to make sense of this situation is to consider the gatekeeping function that § 101 plays within the patent law, also discussed within the Supreme Court cases but at times in a more subtle way. To understand this function more clearly, we can look to the hypothetical discussed by Chief Judge Archer to explain how § 101, when correctly applied, “lays the predicate for the other provisions of the patent law.” *Alappat*, 33 F.3d at 1553. This hypothetical illustrates that, but for § 101 eligibility principles, a patent could be awarded for originating a new musical composition—something generally agreed to be outside the subject of patent law—by claiming the song in a generic physical form such as a CD (it was the 1990s, after all). *Id.* at 1553-54. Assuming the musical composition was original, the physical structure of the CD would contain a unique assembly of pits and lands specific to that new piece of music, and thus it would be a composition of matter that is structurally novel under § 102. And because “the patent law cannot examine music for ‘nonobviousness,’ the Patent and Trademark Office could not make a showing of obviousness under § 103” (which it would be their burden to do). *Id.* at 1554. And even if they could examine this question, the PTO examiners ought not to be judging musical compositions for obviousness (*e.g.*, imagine patent examiners charged with determining whether a guitar lick or chord progression is obvious under patent law). The result of allowing through the eligibility gate a claim reciting a CD (or equivalent generic structure) embodying the new song could be patent exclusivity granted for discovering a new musical composition. Chief Judge Archer posited that § 101 acts as a gatekeeper to prevent such discoveries from being eligible themselves for analysis of patentability under the remaining patent law provisions.

The Supreme Court has also discussed this gatekeeping aspect of patent eligibility. In *Mayo*, the Court rejected the government’s argument as an *amicus* that “virtually any step beyond a statement of a law of nature itself should transform an unpatentable law of nature into a potentially patentable application sufficient to satisfy § 101’s demands.” *Mayo*, 132 S.Ct. at 1303. In so doing, the Court

discussed the limitations of patent law's other provisions to judge ineligible subject matter:

We recognize that, in evaluating the significance of additional steps, the § 101 patent-eligibility inquiry and, say, the § 102 novelty inquiry might sometimes overlap. But that need not always be so. And to shift the patent-eligibility inquiry entirely to these later sections risks creating significantly greater legal uncertainty, while assuming that those sections can do work that they are not equipped to do.

Id. at 1304 (concluding that §§ 102, 103, and 112 cannot “substitute . . . for the better established inquiry under § 101”). The Court recognized that the presence of a law of nature in a claim would not be entirely ignored when analyzing novelty and nonobviousness, since it is indeed an aspect of the claimed invention. *Id.* In other words, the entirety of the claimed subject matter that passes through the eligibility gate is evaluated for novelty and nonobviousness. This operation of the patent law is viewed as *supporting* a need for an eligibility inquiry up front, which asks whether the invention as described and claimed by the patentee as a whole resides in something more than just the new idea or law of nature itself, so that it is appropriate to allow the claim as a whole to be judged by the remaining substantive patentability provisions. And, from this perspective, we can also understand how very basic questions of a patent's stated novelty for the claimed subject matter, and the breadth of the claim, can impact how the eligibility question is answered. See, e.g., *id.* at 1295, 1297-98; *Alice*, 134 S.Ct. at 2359-60; *Ass'n for Molecular Pathology v. Myriad Genetics, Inc.*, 133 S.Ct. 2107, 2116-19 (2013).

Chief Judge Archer's hypothetical in dissent wound up playing out in the area of business method patents. The Federal Circuit's decision in *State St. Bank & Trust Co. v. Signature Fin. Grp., Inc.*, 149 F.3d 1368 (Fed. Cir. 1998), having as a foundation the majority opinion in *Alappat*, opened the floodgates for patenting new methods of conducting business. Seismic changes in the way banking was done during the late 1980s (see *The Big Short* for a dramatization of that happening) fostered this eventual patenting explosion. Although these patents generated controversy, it would take over a decade and a half, until *Alice*, for the Supreme Court to rule that inventions residing in a way of doing banking business were simply beyond the realm of patent law, even where the claims recited generic computing structures. See *Alice*, 134 S.Ct. at 2360. This decision has dramatically changed how lower courts look at business method patents. See, e.g., *Ultramercial, Inc. v. Hulu, LLC*, 772 F.3d 709 (Fed. Cir. 2014) (reversing its own two pre-*Alice* rulings that had upheld validity, and finding the patents in suit to be ineligible).

Currently, the gateway through which a proposed invention must pass is based on Supreme Court precedent, including the *Mayo* ruling. In close cases, the § 101 principles may not be so easy to apply, especially since inventions generally speaking are constituted from arrangements of physical forms, which call into

operation laws of nature and natural principles, arriving at a useful result. See, e.g., *Alappat*, 33 F.3d at 1551-52 (quoting G. Curtis, *A Treatise on the Law of Patents for Useful Inventions* at xxiii-xxv (4th ed. 1873)); cf. *Graver Tank & Mfg. Co. v. Linde Air Products Co.*, 339 U.S. 605, 609-10 (1950) (underlying a claimed invention is its “way,” the physical form; “function,” the principles of operation; and “result,” the effect achieved). Thus, the task of separating what is appropriate for the subject of patent law from what is not appears to inevitably demand a set of core principles, rather than a detailed recitation of rules that neatly answers every case in all technical areas. Historical efforts by courts to construct rigid mechanical tests for eligibility have, after struggling and evolving, ultimately failed. For example, in the late 1970s and early 1980s, the Federal Circuit’s predecessor court developed a series of rules for eligibility, which lengthened in name as subsequent cases recognized the need to address existing inadequacies—the so-called *Freeman–Walter–Abele* test—before it was finally rejected. See, e.g., *State St. Bank*, 149 F.3d at 1374. As Chief Judge Archer explained, “[w]ithout particular claimed subject matter in mind, it is impossible to generalize with bright line rules the dividing line between what is in substance [a patent-eligible application] versus merely the discovery of an abstract idea or law of nature or principle outside § 101.” *Alappat*, 33 F.3d at 1554. He observed that the copyright law has long lived with a similar tension in the idea/expression dichotomy (*i.e.*, the principle that the expression of ideas can be protected by copyright but not ideas themselves). *Id.* at 1554 n.15; see also 17 U.S.C. § 102(b). However, as he explained, “[t]here are . . . answers in every § 101 case.” *Alappat*, 33 F.3d at 1554. One question that has arisen is whether the Federal Circuit’s more recent decision in *Genetic Techs. Ltd. v. Merial L.L.C.*, Nos. 2015-1202, 2015-1203 (Fed. Cir. Apr. 8, 2016)—which stated (slip op. at 11) that it was effectively bound to its outcome by *Ariosa*, which was itself said to be compelled by *Mayo* in the opinion of Judge Lourie (*Ariosa*, 809 F.3d at 1284)—altogether signals an attempt to return to a set of bright-line rules, or whether these cases instead reflect a genuine acceptance and application of the Supreme Court’s § 101 principles on their specific facts. Either way, the Supreme Court precedents are ultimately bookends for understanding how to apply the law of eligibility in any particular situation.

As we can therefore see, § 101’s gatekeeping role is not distinct from the provision’s policy purpose of preventing undue preemption. A possible way to think about it is that if the *Mayo* test is properly applied, and the totality of claimed subject matter is allowed through the eligibility gate, then the law of novelty and nonobviousness and claim breadth should, for example, be operating on subject matter in a way that is appropriate under the patent law. This is a way to make sense of the different outcomes in *Diamond v. Diehr* (finding eligible a claim to an improved rubber-curing process that involved use of a computer algorithm) and *Parker v. Flook* (finding ineligible a claim to a method for using an algorithm to adjust alarm limits). See *Alice*, 132 S.Ct. at 2358. From a practice standpoint, thinking about § 101’s gatekeeping function in relation to the totality of the claimed subject matter may in some cases serve as a useful check on understanding how a court may perceive the patent eligibility issue. For example, if the novelty or nonobviousness analyses would devolve into an evaluation of the novelty or nonobviousness of an idea or natural phenomenon itself, without significantly more

to that inquiry, that may indicate to the inventor, the patent examiner, or the court that the invention is treading near the borderline of patent-ineligible subject matter. This is a more nuanced understanding than simply regarding *Mayo* as articulating a “two-part test,” without adequate recognition as to what that test is trying to do.

In our next post, we consider the different opinions in the denial of the petition for rehearing in *Ariosa* and particularly their expressed commentary on principles of patent eligibility.



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