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Making Sense of *Prometheus*

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By Marc Goldman and Bradford Lyerla

Coming only two years after its decision in *Bilski v. Kappos*, 130 S. Ct. 3218 (2010), the Supreme Court's unanimous decision in *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 132 S. Ct. 1289 (2012), constitutes the Supreme Court's latest attempt to resolve a longstanding tension in patent law concerning what subject matter is eligible for patent protection under Section 101 of the Patent Act. In the *Prometheus* decision, the Supreme Court explained the arguments for both a broad view and a narrow view of Section 101 and then set forth an approach that purported to chart an intermediate course, albeit one that narrowed the scope of patentability as compared with the view articulated by the Federal Circuit.

The Court identified two principal factors for determining whether an invention is patentable or whether it constitutes a nonpatentable "law of nature, natural phenomenon or abstract idea": whether, after setting aside any law of nature, natural phenomenon, or abstract idea encompassed in the claim, a patent contains an inventive concept and whether the patent claims fewer than all applications of the law of nature, natural phenomenon, or abstract idea. With respect to how these factors should be applied and what they mean, however, the opinion is often either vague or contradictory, providing practitioners grist to argue for or against patentability in almost any case. The vague and contradictory nature of the opinion may result from difficulties inherent in resolving the tensions in this area of the law given the tasks the Court set forth—to disallow the patentability of laws of nature, natural phenomena, and abstract ideas even when they are embodied in concrete products and processes but to avoid eviscerating all of patent law. Despite multiple decisions interpreting Section 101, the Court has yet to clearly explain how it is possible to achieve both goals in a principled fashion.

Background

Under Section 101 of the Patent Act, anyone who "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. While this language is very broad, the Supreme Court has long held that "laws of nature, natural phenomena, and abstract ideas" are not patentable. *Prometheus* at 1293 (citing *Diamond v. Diehr*, 450 U.S. 175, 185 (1981)). Newton, for example, could not have patented the law of gravity. *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980). This conclusion could be said to stem from the language of Section 101—the law of gravity is not a process, machine, manufacture, or composition of matter. In *Prometheus*, however, the Court emphasized, as it had in prior cases, that, under longstanding precedent, it is not simply laws of nature, natural phenomena, and abstract ideas that are unpatentable under Section 101. Processes and products based on laws of nature, natural phenomena, and abstract ideas can themselves be unpatentable based on an "implicit exception" to Section 101. *Prometheus*, 132 S. Ct. at 1293; *see also Bilski*, 130 S. Ct. at 3225.

The Court thus rejected the approach to Section 101 advocated by the United States and many practitioners in which "virtually any step beyond a statement of a law of nature itself should transform an unpatentable law of nature into a potentially patentable application," with overbroad or obvious claims invalidated based on other provisions in the Patent Act. The Court explained that the government's preferred approach would be inconsistent with prior cases because it "would make the 'law of nature' exception to § 101 a dead letter" by confining it to claims to a law of nature itself, not to any applications of such a law. *Prometheus*, 132 S. Ct. at 1303. If, for example, an inventor discovered a law of nature and appended conventional steps to it to claim a concrete process that encompassed all applications of a law of nature, the claim would be patentable under the approach the Court attributed to the United States. In the Court's view, there are important precedential and policy reasons why this should not be. The Supreme Court's prior cases, *Prometheus* explained, "warn us against upholding patents that claim processes that too broadly preempt the use of a natural law." *Id*. at 1294. That is because the monopolization of basic tools of scientific work, such as natural laws, would impede innovation rather than promote it. *Id*. at 1293, 1304. Sections of the Patent Act other than Section 101 cannot protect this important goal. A claim appending routine steps to a newly discovered law of nature would not be invalidated as obvious under Section 103, for example, because the law of nature itself would not previously have been described in the art. *Id*. at 1303–04.

The Court simultaneously emphasized, however, that its prior decisions recognize "that too broad an interpretation of this exclusionary principle [the law of nature exception] could eviscerate patent law. For all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas." *Id*. at 1293.

In explaining the balanced approach the Court attributed to its prior decisions, the Court pointed to two cases that have long been thought to reflect opposed views of patentability. In the first, *Parker v. Flook*, 437 U.S. 584 (1978), the Court found unpatentable a process that used a novel mathematical algorithm to adjust "alarm limits" in the catalytic conversion of hydrocarbons based on temperature readings. Even though the claims used the algorithm as part of a process that produced useful results, the Court found that the steps in the claim aside from the formula were so well known that there was no inventive concept aside from the formula. *Id.* at 586, 589–90, 594.

In the second case, *Diamond v. Diehr*, 450 U.S. 175 (1981), the Court found patentable a process for curing rubber in which a computer plugged certain inputs into a new mathematical equation and, based on the results, determined the proper time to signal a device to open a press. The Court held that the invention was based on an abstract idea (an algorithm) and that the fact that the steps beyond the algorithm might not be novel was irrelevant. Inventions must be considered as a whole, and the invention of *Diehr* was novel when considered in that way. *Id*. at 188–89. The Court explained that "[t]he 'novelty' of any element or steps in a process, or even of the process itself, is of no relevance in determining whether the subject matter of a claim falls within the § 101 categories of possibly patentable subject matter." *Id*. Moreover, if Section 101 required an assessment of whether elements other than the algorithm were novel, this "would, if carried to its extreme, make all inventions unpatentable because all inventions can be reduced to underlying principles of nature that, once known, make their implementation obvious." *Id*. at 189.

For years, *Diehr* was seen by many as largely repudiating the result in *Flook*. After *Diehr*, a series of Federal Circuit cases found processes patentable so long as they produced useful, tangible, and concrete results, *see, e.g.*, *State St. Bank & Trust Co. v. Signature Fin. Group*,149 F.3d 1368, 1373 (1998). The Federal Circuit concluded in *Bilski* that this test was too broad, and replaced it with a test that continued to permit patentees to claim broad applications of abstract ideas or natural laws so long as the ideas/laws were implemented on a machine or involved the transformation of matter. *In re Bilski*, 545 F.3d 943, 954 (Fed. Cir. 2008) (*en banc*).

In reviewing the Federal Circuit's decision in *Bilski*, the Supreme Court began breathing life back into *Flook*, a process it continued in *Prometheus*. In *Bilski*, the Supreme Court concluded that the Federal Circuit's machine or transformation test was too narrow—a process could be patentable even if it did not occur on a machine or transform matter. However, the Court held that the particular process at issue in *Bilski* was not patentable because it consisted principally of the abstract idea of hedging risk reduced to a mathematical formula and that the inclusion of "token postsolution components" in some of the patent's claims did not render it patentable. *Bilski*, 130 S. Ct.at 3231. In holding that post-solution activity is insufficient, the Supreme Court relied on *Flook,* but this holding was also cited in *Diehr*.

In *Prometheus*, the Court relied even more centrally on *Flook* while simultaneously relying on *Diehr*. It charted a course that purported to be consistent with both decisions and thus to serve the goal of preventing the patentability of claims that too broadly preempt a law of nature without eviscerating all of patent law. In doing so, however, the Court failed to articulate a clear way forward, providing grist for practitioners to argue both for and against patentability in almost any case.

The Holding of *Prometheus*

The patent at issue in *Prometheus* claimed a process that involved the administration of thiopurine drugs to a patient, the measurement of the level of a metabolite produced in the patient, and the consideration of that level in deciding proper dosage for the patient based on research findings involving correlations between metabolite levels and likely harm or ineffectiveness of the drugs. (The patent did not actually direct consideration of the metabolite levels in treatment; it instead said that certain levels indicated a need to increase or decrease dosage. The Supreme Court, however, treated the patent as one specifying consideration of the metabolite levels in treatment.) The Federal Circuit found that administration of the drugs transformed the human body, the determination of metabolite levels transformed the blood, and these transformations, considered as a clue to patentability, were sufficient to establish that the claims do not preempt laws of nature. *See* 581 F.3d 1336, 1345–47 (2009); 628 F.3d 1347, 1355 (2010).

The Supreme Court reversed. The claimed process involving the transformation of matter did not establish patentability, the Court said, because, among other things, the machine-or-transformation test does not trump the law-of-nature exclusion. *Prometheus*, 132 S. Ct. at 1296. According to the Court, the law-of-nature exception came into play because the correlation between metabolite levels and drug toxicity constitutes a law of nature. *Id.* at 1297–98, 1302.

The other steps in the claimed process did not save the patent. They:

> Add[ed] nothing specific to the laws of nature other than what is well-understood, routine, conventional activity, previously engaged in by those in the field. And since these [we]re steps that must be taken in order to apply the laws in question, the effect [wa]s simply to tell doctors to apply the law somehow when treating their patients.

Prometheus, 132 S. Ct. at 1302.

Thus, the Court set forth two critical factors in assessing patentability. The first was whether the steps added to the law of nature constitute "routine, conventional activity" (*Id*. at 1298) or instead are "inventive" (*Id.* at 1299) (the inventiveness prong). The second was whether the steps added to the law of nature are ones that must be taken to apply the laws in question (the limitations prong). *See also id.* at 1294 (characterizing prior cases as warning against upholding claims "that too broadly preempt the use of a natural law" and requiring that claimed processes contain an "inventive concept.") (quoting *Flook*, 437 U.S. at 594). Prometheus's claims thus violated the principle "that simply appending conventional steps, specified at a high level of generality, to laws of nature, natural phenomena and abstract ideas cannot make those laws, phenomena and ideas patentable." *Prometheus*, 132 S. Ct. at 1300.

Because of the Court's emphasis on the inventiveness of steps beyond the law of nature, *Prometheus* can be read as a return to *Flook*. That, however, would leave almost every patent claim vulnerable to challenge based on the issue identified in *Diehr*. If courts evaluate whether a claim is inventive *aside* from any laws of nature or abstract ideas embodied in the claims, it may be that very little is patentable. Such an approach provides practitioners seeking to argue against patentability a basis to do so in almost every case. But the Court simultaneously said that it did not intend such a result. Practitioners arguing in favor of patentability can rely on this intention to argue against any interpretation that would lead to this result. They can do so by arguing that, even if the only claim steps considered are those aside from a law of nature and even if such steps will rarely be novel, these steps can nonetheless be inventive, and a claim can be patentable if it meets the limitations prong even if it does not meet the inventiveness prong.

The Inventiveness Prong

Reading the Inventiveness Prong to Render Almost Any Claim Unpatentable

Practitioners seeking to challenge a claim as unpatentable can argue that *Prometheus* constitutes a return to the principles of *Flook* while simultaneously arguing that, when these principles are applied, virtually nothing is patentable. In addition to the language the Court used in specifically invalidating Prometheus's patent, there are numerous passages throughout the opinion that suggest that, in assessing the inventiveness of a claim for purposes of Section 101, a court should set aside any law of nature or abstract idea encompassed in the claim and look only at the additional steps to determine whether they are novel. For example, the Court favorably cited *Flook* itself as based on the principle that claiming steps beyond use of a mathematical algorithm does not render a claim patentable if these steps are "'well known,' to the point where, putting the formula to the side, there was no 'inventive concept' in the claimed application of the formula." *Prometheus*, 132 S. Ct. at 1299 (quoting *Flook* at 589, 590). Similarly, the Court approvingly cites an old English case (*Neilson v. Harford*, Web. Pat. Cases 295, 371 (1844)) that treated a principle discovered by the inventor "as if the principle [were] well known" and then assessed patentability based on whether the additional steps constituted an inventive way of applying that principle—seemingly in direct conflict with the teaching of *Diehr* that novelty should be assessed based on the invention as a whole. *Prometheus*, 132 S. Ct. at 1300 (citing *O'Reilly v. Morse*, 56 U.S. 62, 114–15 (1854)). Indeed, *Neilson* was cited in *Flook* for the proposition that patentability must be evaluated based on an assumption that the law of nature or abstract idea is well known with the separate steps then evaluated to determine whether they are inventive. *Flook*, 437 U.S. at 592.

In addition, *Prometheus* explained the result in *Diehr* without reliance on what has long been thought to be *Diehr*'s core holding: that the novelty of patent claims must be assessed as a whole. *Prometheus* said that the claims in *Diehr* were patentable because the steps that were combined with the algorithm in the claims "apparently added to the formula something that in terms of patent law's objectives had significance—they transformed the process into an inventive application of the formula." *Prometheus*, 132 S. Ct. at 1299. In other words, *Prometheus* explained *Diehr* with a focus on the effect of the steps that were combined with the algorithm in the claim, not with reference to the claim as a whole (although it did cite *Diehr*'s holding regarding whole claims).

Prometheus also asserted that, for purposes of Section 101, it would be inadequate to assess the inventiveness of a patent claim by analyzing a patent claim as a whole. In rejecting the United States' proposed approach in which "virtually any step . . . [w]ould transform an unpatentable law of nature into a potentially patentable application" with overbroad or obvious claims invalidated based on other provisions in the Patent Act, the Court emphasized that these other sections would not suffice. *Id*. at 1303–04. As discussed at the outset, the Court concluded that the non-obviousness requirement would not suffice to weed out claims that append conventional steps to a newly discovered law of nature. *Prometheus*, 132 S. Ct. at 1304. Analyzed as a whole, a claim that merely appends conventional steps to a law of nature would not be obvious if the claimed law of nature itself was newly discovered. *Id.* ("Intuitively, one would suppose that a newly discovered law of nature is novel."). And such claims *should* be weeded out as nonpatentable, in the Court's view. Otherwise, careful drafting could permit inventors to claim all applications of a law of nature merely by appending conventional steps to their claims. *Id*. at 1300–02.

In one respect, *Prometheus* broadens the arsenal of arguments against the patentability of a claim even beyond that stemming from *Flook* itself. *Prometheus* treated as a natural law the correlation between metabolite levels and toxicity claimed in Prometheus's patent, even though the metabolites exist only as a result of administration by doctors of a drug created by humans. *Prometheus*, 132 S. Ct. at 1297–98, 1300. If a correlation that results from human activity constitutes a natural law, as

Prometheus concludes, there is an argument that everything is "natural" and hence unpatentable, including even products created by humans. Indeed, new products are created only as the result of natural laws regarding combinations of ingredients and the effects of those combinations, and the products thus could be said to be obvious once those natural laws are understood. Thus, *Prometheus* provides grist for arguments against patentability in virtually any case, including those involving product claims.

A Narrow Reading of the Inventiveness Prong

The Court, however, plainly did not intend its decision to result in the conclusion that nothing is patentable. It disavowed interpretations of Section 101 that would have that result (*id.* at 1294), and it contrasted Prometheus's claims in which the additional steps "add nothing of significance to the natural laws themselves" with "a typical patent on a new drug or a new way of using an existing drug" that "confine[s] the[] reach [of the laws] to particular applications of the laws." *Id*. at 1302.

Moreover, despite repeated references to an approach that analyzes inventiveness by separating a law of nature from steps appended to it, the Court's decision in one place lauded the very "whole claim" approach from *Diehr* that it elsewhere seemed to reject. In discussing the non-obviousness requirement of Section 103, the Court stated that the non-obviousness requirement should not be applied in a manner that focuses solely on the claimed steps other than a law of nature or an abstract idea. The Court said that such an approach would be inconsistent with the holding of *Diehr* that "patent claims 'must be considered as a whole'" under Sections 102 and 103. *Id*. at 1304 (quoting *Diehr*, 450 U.S. at 188).

As a formal matter, it is possible to reconcile the Court's statements lauding use of the whole-claim approach for purposes of Sections 102 and 103 with the Court's apparent rejection of this approach for purposes of Section 101. That would not, however, reconcile *Prometheus* with *Diehr* even as a formal matter because *Diehr* explicitly adopted the whole-claim approach for purposes of Section 101 and disavowed any use of novelty to assess patentability under Section 101. More importantly, the reason the Court provided as to why patent claims should be analyzed as a whole for purpose of Sections 102 and 103 seems equally applicable to Section 101. That reason is that "studiously ignoring all laws of nature when evaluating a patent application under sections 102 and 103 would 'make all inventions unpatentable because all inventions can be reduced to underlying principles of nature which, once known, make their implementation obvious.'" *Id*. (quoting *Diehr*, 450 U.S. at 189 n.12).

Given the Court's view that all claims would be obvious if claims were not considered as a whole, it is possible to argue that *Prometheus* cannot possibly have rejected *Diehr*'s whole-claim approach even for purposes of Section 101. But, as discussed above, the Court does seem to have rejected that approach.

Unless the Court is blind to this seeming contradiction in its reasoning, the Court must believe that something other than a whole-claim approach can be used for Section 101 without rendering all claims unpatentable, even though this would not be possible under Sections 102 and 103. In other words, the Court must believe that ignoring laws of nature/abstract ideas when assessing the patentability of a claim will not have the same result as it would when assessing obviousness or anticipation. Because that appears to be the Court's view, practitioners seeking to establish the patentability of a claim have a basis to argue that the inventiveness and limitations prongs in *Prometheus* must in some respect be less rigorous than would an obviousness or anticipation inquiry under Sections 102 or 103.

The Inventiveness Prong Can Be Read as Less Rigorous than Non-Obviousness

One possibility for practitioners seeking to establish the patentability of claims is to argue that inventiveness means something different than non-obviousness under Section 103. Although the Court has said that the steps to implement a law of nature will be obvious once a law of nature is understood, it may be that such steps can nonetheless be inventive as the Court understands the term. *Cf. id.* at 1304 (explaining that the Section 101 patent eligibility inquiry and the Section 102 novelty inquiry "might sometimes overlap . . . [b]ut that need not always be so"); *but cf. id.* at 1298 (quoting *Flook* for the proposition that "'[p]urely conventional *or obvious*'[pre-solution activity] is normally not sufficient to transform an unpatentable law of nature into a patent-eligible application of such a law") (emphasis added).

As noted above, *Prometheus* explained the finding of patentability in *Diehr* as based on the proposition that the claims "apparently added to the formula something that in terms of patent law's objectives had significance—they transformed the process into an inventive application of the formula." *Id.* at 1299. Similarly, in approvingly citing the reasoning of the *Neilson* case, the Court said that the English court found the process patentable because the process implemented the abstract idea through "several unconventional steps." *Id.* at 1300. Thus, the Court apparently believes that it is possible for steps implementing a law of nature/abstract idea to be inventive or unconventional even though the Court said that all such steps will be obvious once the abstract principle they are implementing is understood. Logically, the Court can only believe both things if the concept of inventiveness in Section 101 means something different than non-obviousness.

The Court did not say what that difference is. *Prometheus* contrasted inventive steps with "well-understood, routine, conventional activity." *See, e.g., id.* at 1294. It did not otherwise explain the meaning of inventiveness. What that meaning could be is left for practitioners to argue about and lower courts to articulate. Whether there even is a sensible theory of inventiveness distinct from non-obviousness remains uncertain.

Of course, it may be that the Court was wrong in asserting that steps appended to a law of nature will always be obvious once a law of nature is understood. Because this assertion was an observation rather than a holding of the Court, practitioners seeking to defend the patentability of a claim are free to argue that appended steps are notobvious and therefore inventive. The fact that the Court believes both that all appended steps are obvious and that some of these steps are inventive merely provides an additional argument—that the standard of inventiveness must be less rigorous than the standard of non-obviousness.

The Limitations Prong

A second possibility for practitioners seeking to establish the patentability of a claim after *Prometheus* is to argue that the claim satisfies the limitations prong and that this is sufficient to establish patentability regardless of whether the claim satisfies the inventiveness prong.

As discussed above, the Court found Prometheus's claims unpatentable both because the steps appended to the law of nature were not inventive and because they did not limit the claims to any particular application of the law of nature. The claims did not direct doctors to employ any particular treatment based on the metabolite levels found in a patient's blood but instead simply directed doctors to consider the results of the correlation in making treatment decisions. As a result, the claims encompassed all applications of the law of nature by "t[ying] up the doctor's subsequent treatment decision whether that treatment does, or does not, change in light of the inference he has drawn using the correlations." *Id*. at 1302; *see also id*. at 1300.

The Court was deliberately unclear as to whether Prometheus's claims would have been patentable if they satisfied the novelty prong but not the limitations prong or the limitations prong but not the novelty prong. After noting that Prometheus's claims tied up all applications of a law of nature, the Court stated that "[w]e need not, and do not, now decide whether were the steps at issue here less conventional, these features of the claims would prove sufficient to invalidate them." *Id.* at 1302. The Court also did not need to, and did not, decide the converse: whether were the steps at issue more limiting, the conventional features of the claims would have been sufficient to invalidate them. It said, for example, "that simply appending conventional steps, specified at a high level of generality, to laws of nature, natural phenomena and abstract ideas cannot make those laws, phenomena and ideas patentable." *Id.* at 1292. But it did not say whether appending conventional steps that were not highly general could make the laws, phenomena, and ideas patentable.

The Court's discussion of prior cases does not answer the question of whether the limitations prong is independent of the inventiveness prong. Throughout its opinion, when it explained why past decisions found claims either patentable or unpatentable, the Court referenced the limitations prong as well as the inventiveness prong, making it impossible to infer whether either alone would have sufficed. In discussing *Flook*, for example, *Prometheus* noted that the finding of unpatentability in that case was based on both the routine nature of the claimed steps and on the fact that the steps "did not limit the claim to a particular application," *Id.* at 1292 (quoting *Flook* at 589, 590). Similarly, in approvingly citing the *Neilson* case referenced above in which an English court found a claim to be patentable, the Court noted not only the supposed inventiveness of the added steps, but also that the steps "confined the claims to a particular, useful application of the principle." *Id.* at 1300.

Because the Court did not decide whether a claim that meets the limitations prong but not the inventiveness prong is patentable, practitioners defending patentability of a claim can argue that meeting the limitations prong suffices. Indeed, they can argue that the limitations prong alone must be sufficient to establish patentability. If a claim also had to satisfy the inventiveness prong, it might be that few, if any, claims would be patentable given the Court's conclusion that steps appended to a law of nature are likely to be obvious, and that is not the result the Court intended. Practitioners can also argue that the Court's overarching purpose in *Prometheus* was to ensure that patentees do not claim all applications of a law of nature or an abstract idea—a purpose that is satisfied so long as the limitations prong is met even if the inventiveness prong is not met. So long as the limitations prong is met, the claim at issue satisfies the Court's stricture that a claim must "provide practical assurance that the process is more than a drafting effort designed to monopolize the law of nature itself." *Id.* at 1297.

After arguing that a claim is patentable so long as it satisfies the limitations prong, practitioners seeking to defend the patentability of a claim can argue that almost any limitation can satisfy the limitations prong. They will have to acknowledge that not every limitation will be sufficient, because the Court stated that the question is whether the limiting steps "add *enough*" to a natural law to be patentable. *Id.*; *see also id*. at 3 (patent must claim "significantly" more than natural law); *id*. at 1294 (finding a claim unpatentable because it would "disproportionately" tie up natural law). Indeed, the Court held that the fact that Prometheus's claim applied only to doctors did not save the claim because, under *Bilski*, limiting the use of an abstract idea or law of nature to a particular technological environment is insufficient to satisfy the limitations prong. *Id.* at 1297 (citing *Bilski*, 130 S. Ct. at 3230). Nonetheless, practitioners can argue that most limitations add enough to a natural law to satisfy the limitations prong.

They can point to an important contrast the Court drew between Prometheus's claims in which the additional steps "add nothing of significance to the natural laws themselves" and the claims in "a typical patent on a new drug or a new way of using an existing drug" that "confine[s] the[] reach [of the laws] to particular applications of the laws." *Id*. at 1302. In drawing this contrast, the Court did not explain how a patent for a new use of a drug

(or a new drug) would confine the natural law discovered (that treatment with the drug reduces a particular disease) to a greater extent than did Prometheus's patent. The lack of explanation leaves room for practitioners to argue that any standard type of claim remains patentable and that the limitations prong is relatively easy to satisfy. Such practitioners can reasonably argue that the result in *Prometheus* is based on its relatively unique facts, in which the claim required doctors simply to consider the results of a correlation and that it does not suggest that any other types of claims are unpatentable.

But those arguing against the patentability of a particular claim also have a strong basis in *Prometheus* to counter these arguments related to the limitations prong. To begin with, they can dispute the contention that a claim is patentable if it satisfies the limitations prong alone without satisfying the inventiveness prong. They can say that the reason *Prometheus* rejected an approach that would rely only on Sections 102 and 103 to assess novelty is that the Court views inventiveness as an integral part of the analysis under Section 101. *Id.* at 1303–04. Moreover, the Court relied heavily on *Flook*, and *Flook* expressly rejected the notion that "post-solution activity, no matter how conventional or obvious in itself, can transform an unpatentable principle into a patentable process" simply because it limits the claim, though this holding may apply only to post-solution activity. *Flook*, 437 U.S at 589. Finally, while *Prometheus* repeatedly referenced both the inventiveness prong and the limitations prong, it sometimes suggested that a claim must include inventive steps to satisfy the limitations prong. For example, in discussing *Diehr*, the Court said that it was because the claim included unconventional steps that the patent did not preempt all uses of the equation. *Prometheus*, 132 S. Ct. at 1299.

Moreover, practitioners arguing against patentability can say that if the limitations prong alone sufficed to establish patentability and the limitations prong could be satisfied through virtually any steps that limit a claim to fewer than all applications of a law of nature, then careful draftsmen could readily ensure the patentability of virtually any claim. That would not be consistent with the Court's intent, because the Court inveighed against interpreting Section 101 in a manner that makes patent eligibility depend on the draftsman's art. *Id.* at 1294. *See also Flook*, 437 U.S at 588.

An Additional Source of Uncertainty

The Court's approach to patentability assumes that even though everything is at bottom based on a law of nature or an abstract idea, it is possible to differentiate those claim steps that implement a law of nature or an abstract idea from those that embody the law of nature or abstract idea. It is the implementing steps that must be inventive and/or limiting. As discussed, there is substantial uncertainty in evaluating the inventiveness and limitations prongs. There is an additional source of uncertainty as well. Practitioners opposing patentability can always argue that any supposedly inventive/limiting step is not an implementing step at all, but rather that the step itself embodies a law of nature or an abstract idea. Consider the claim step in *Diehr* involving the closing of a mold. While that step might help implement the mathematical algorithm in the claim, it could also be said to embody a different law of nature—the law of nature that pressure can turn liquids into solids. The use of a mold could be considered a routine implementation of that law of nature.

Conclusion

Prometheus focuses the analysis of patentability on whether a claim contains inventive steps separate from a law of nature and the extent to which those steps limit application of the law of nature. The relationship and meaning of these novelty and limitations prongs, however, remain uncertain. There are aspects of the Court's opinion that provide a basis for practitioners to argue that very few claims are patentable, along with aspects that provide a basis to argue that virtually all claims are.

The uncertainty may be inevitable given the Court's view of the goal of Section 101. The Court believes that there is a need based on precedent and policy to find unpatentable more than just natural laws and abstract ideas themselves, and it does not want to accept the use of a test such as the machine or transformation test that would automatically establish patentability if claims meet certain definitive parameters. However, the Court simultaneously wants to avoid interpreting Section 101—a provision designed to say what *is* patentable—as rendering unpatentable broad categories of claims. Given the Court's understanding that all patents can be reduced to natural laws and abstract ideas that make their implementation obvious, it is unclear whether it is possible to articulate a principled basis for holding that some claims constitute unpatentable natural laws or abstract ideas while others constitute patentable applications of these natural laws or abstract ideas.

The Supreme Court has recently granted, vacated, and remanded in two cases in light of *Prometheus—WildTangent, Inc. v. Ultramercial LLC*, No. 11-962 (May 21, 2012) and *Ass'n for Molecular Pathology v. U.S. Pat. & Trademark Office,* No. 11-725 (March 26, 2012) (*Myriad*). While these actions say nothing about the Court's views on the merits of these cases, they leave the Federal Circuit in the difficult position of quickly applying *Prometheus* in important contexts. Given the tensions within *Prometheus*, the Federal Circuit will have a difficult task in articulating a principled basis to distinguish what is patentable under *Prometheus* from what is not and may ultimately be forced to rely on a "you know it when you see it" sort of approach. But one place the Federal Circuit and other courts can start is by evaluating whether there is a sensible interpretation of the inventiveness prong in *Prometheus* that would permit claim steps to be found inventive even if they would be obvious once the underlying law of nature is understood. A second place to start is evaluating whether the limitations prong can provide a path to patentability distinct from the inventiveness prong.