

No. 20-891

IN THE
Supreme Court of the United States

AMERICAN AXLE & MANUFACTURING, INC.,
Petitioner,

v.

NEAPCO HOLDINGS LLC AND
NEAPCO DRIVELINES LLC,
Respondents.

**ON PETITION FOR WRIT OF CERTIORARI TO THE
U.S. COURT OF APPEALS FOR THE FEDERAL CIRCUIT**

PETITIONER'S REPLY BRIEF

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PETITIONER'S REPLY BRIEF

The Federal Circuit's application of this Court's two-step patent-eligibility framework has taken it down the wrong path, deepening the "uncertainty" and "confusion created by this Court's recent Section 101 precedents." U.S. Br. 8, *Hikma Pharmaceuticals USA Inc. v. Vanda Pharmaceuticals Inc.*, No. 18-817 (cert. denied Jan. 13, 2020). With the Federal Circuit evenly divided, only this Court can provide the needed course correction.

The Court should do so by granting certiorari and holding that a patent claim is "directed to" a law of nature within the meaning of step 1 of the Court's framework only if it implicates the concern that justified grafting that judge-made, atextual framework onto the Patent Act in the first place: the "concern that patent law not inhibit further discovery by improperly tying up the future use of laws of nature." *Mayo Collaborative Services v. Prometheus Laboratories, Inc.*, 566 U.S. 66, 85 (2012). A claim that poses no such threat—like the industrial manufacturing method at issue here—is not "directed to" a law of nature and is valid so long as it meets the textual requirements of the Act.

I. A patent that poses no threat of improperly tying up a law of nature is not "directed to" such a law.

Mayo "set forth a framework for distinguishing patents that claim laws of nature, natural phenomena, and abstract ideas from those that claim patent-eligible applications of those concepts." *Alice Corp. v. CLS Bank International*, 573 U.S. 208, 217 (2014). The framework has two steps. The first asks

whether the claim is “directed to one of those patent-ineligible concepts.” *Id.* “If so,” then the court “search[es] [the claim] for an ‘inventive concept’ ... ‘sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the ineligible concept itself.’” *Id.* (quoting *Mayo*, 566 U.S. at 72-73). The framework is judge-made: The Patent Act does not say that laws of nature are ineligible, and it certainly does not prescribe the “directed to”/“inventive concept” two-step. *See Bilski v. Kappos*, 561 U.S. 593, 601 (2010) (“these exceptions are not required by the statutory text”).

The first question presented asks what it means for a claim to be “directed to” an ineligible concept. *Pet. i.* It cannot be that a patent is “directed to” an ineligible concept whenever it uses or involves one; that would make step 1 a dead letter, because “all inventions ... embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Alice*, 573 U.S. at 217 (quoting *Mayo*, 566 U.S. at 71). The Federal Circuit’s expansive (and expanding) application of “directed to” is now leading it to invalidate the sort of claims that were always previously understood to be eligible. And that court’s bitter division makes clear that it will be unable to formulate a satisfactory standard on its own.

This Court should therefore clarify that a claim is not “directed to” a law of nature or other ineligible concept unless it raises the sort of “pre-emption” concern that led the Court to create the *Mayo* framework in the first place: the “concern that patent law not inhibit further discovery by improperly tying up the future use of the[] building blocks of human

ingenuity.” *Alice*, 573 U.S. at 216 (quoting *Mayo*, 566 U.S. at 85); *see also id.* (“We have described the concern that drives this exclusionary principle as one of pre-emption.”). This purpose-based standard would bring predictability to the law and cabin the judge-made “inventive concept” test to that minority of patent claims that plausibly pose the threat that the test was created to address.

A number of guideposts—or “clues,” to use the Court’s term—should inform the analysis. *See Mayo*, 566 U.S. at 76 (“the ‘machine-or-transformation test’ is ... an important and useful clue” to “patent eligibility”); *Bilski*, 561 U.S. at 604. Several are relevant here, and they confirm that American Axle’s claims are not “directed to” Hooke’s law.

First, the fact that a claim makes use of long-known (rather than newly discovered) laws of nature is a strong clue that it poses no threat of unduly tying up any law. The text of the Patent Act requires a patentable innovation to be novel and nonobvious in light of prior art. *See* 35 U.S.C. §§ 102, 103; *Bilski*, 561 U.S. at 609. Both novelty and obviousness are evaluated from the perspective of a hypothetical “person of ordinary skill in the art.” By definition, known natural laws are part of such a person’s knowledge. Thus, a claim that implicates only known laws could satisfy the textual requirements of the Patent Act only if it constitutes “a patent-eligible *application* of such a law.” *Mayo*, 566 U.S. at 72. In the case of a long-known law of nature, then, those textual requirements are “sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law itself.” *Id.* at 73.

The same cannot be said for newly discovered laws. “Intuitively, one would suppose that a newly discovered law of nature is novel” and non-obvious, so the Act’s textual requirements are “not equipped” to screen out patents directed to such laws and the judge-made “inventive concept” test is necessary. *Id.* at 90. The Court has consistently expressed its concern about patents on laws of nature by reference to the discoverers of such laws: “Einstein could not patent his celebrated law that $E=mc^2$; nor could Newton have patented the law of gravity.” *Id.* at 71 (quoting *Diamond v. Chakrabarty*, 447 U.S. 303, 309 (1980)). “Nor could Archimedes have secured a patent for his famous principle of flotation.” *Id.* at 78. The law of nature in *Mayo* had been discovered by the patentee. *See id.* at 74. And the classic case is *O’Reilly v. Morse*, which invalidated Samuel Morse’s patent on any “use of ... electro-magnetism ... for marking or printing intelligible characters ... at any distances, being a new application of that power of which [Morse] claim[ed] to be the first inventor and discoverer.” 15 How. 62, 112 (1854).

The claim at issue here does not concern any newly discovered law. Neapco itself calls this “a case about applying a law of physics discovered centuries ago to the 150-year-old field of making automotive propshafts.” Opp.24-25. That is precisely the sort of case that the Patent Act’s novelty and nonobviousness requirements were designed to address. Those requirements ensure that any patent that uses Hooke’s law—which was published in the seventeenth century—must offer a novel and nonobvious *application* of the law, for the law itself is already known in the art.

A second important clue that a claim poses no threat of unduly preempting use of any ineligible concept is that it recites subject matter that has historically been considered eligible. Mechanical inventions and industrial manufacturing processes like the method at issue here—a method for making a car part—are obvious examples. “Industrial processes such as this are the types which have historically been eligible to receive the protection of our patent laws.” *Diamond v. Diehr*, 450 U.S. 175, 184 (1981).

By contrast, the threat of improper preemption is greater in certain more recent fields. A computer can implement practically any abstract process, so computer-implemented patents pose a special threat of unduly tying up abstract ideas. Two of this Court’s four twenty-first century eligibility decisions addressed that concern. *See Alice*, 573 U.S. at 218 (“the abstract idea of intermediated settlement”); *Bilski*, 561 U.S. at 611 (“the basic concept of hedging”). The other two addressed biotechnology, a field in which innovations often take the form of discoveries of new natural phenomena or laws of nature. *See Association for Molecular Pathology v. Myriad Genetics, Inc.*, 569 U.S. 576, 580 (2013) (“naturally occurring segment” of human DNA); *Mayo*, 566 U.S. at 74 (“correlations between metabolite levels and likely harm or ineffectiveness” of thiopurine). Neapco itself admits that cases “involving a ‘natural law’ discovered by the patentee ... arise[] almost exclusively in patents for life sciences.” Opp.15. That is American Axle’s point: The concern that the Court created its eligibility framework to address barely exists in other, older fields like industrial manufacturing.

Bilski supports this distinction between fields. It notes that different considerations arise in “evaluating processes similar to those in the Industrial Age—for example, inventions grounded in a physical or other tangible form”—than in “determining the patentability of inventions in the Information Age.” 561 U.S. at 605 (plurality opinion). The process claimed here, a method for manufacturing a particular piece of machinery, falls comfortably on the Industrial Age side of the line. This Court’s patent-eligibility decisions express no concern that patents on such inventions might improperly preempt the long-known laws of nature that they use. It is only the Federal Circuit’s rote application of the Court’s decisions about Information Age technology to this Industrial Age case that has called the historical understanding into doubt and created the present deadlock and confusion.

Bilski also provides a third “important and useful clue” to patent eligibility: the “machine-or-transformation” test. *Mayo*, 566 U.S. at 76. That test says that a process is “patent-eligible 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.” *Bilski*, 561 U.S. at 600. The claim at issue here meets both criteria: it is tied to a driveshaft and transforms that article into a quieter state. *See* Pet. 6-10. While this Court has held that the machine-or-transformation test is only a “clue” to eligibility in the context of Information Age patents on biotechnology discoveries (*Mayo*, 566 U.S. at 87-88) and computer-implemented business methods (*Bilski*, 561 U.S. at 604-05), *Bilski* says that the test “may well provide a sufficient basis for evaluating processes

similar to those in the Industrial Age” (*id.* at 605 (plurality opinion)). The machine-or-transformation test further confirms that the claim at issue here is not directed to ineligible subject matter.

* * *

Under a proper understanding of this Court’s precedents, this is not a close case. The guideposts discussed above make clear that American Axle’s claims do not threaten to unduly tie up Hooke’s law. The claims therefore pass the Court’s two-step framework at step 1. The task of identifying additional guideposts to decide closer cases could be taken up by the Federal Circuit. *See id.* at 613 (encouraging “the Federal Circuit’s development of other limiting criteria that further the purposes of the Patent Act”).

II. There are compelling reasons to cabin the “inventive concept” test to cases that raise the concern it was created to address.

Neapco contends that an unbounded application of step 1’s “directed to” language threatens no mischief, because “[s]tep two already ensures that inventive applications of natural laws are patent-eligible.” Opp.12. But there are compelling reasons to adopt a step 1 standard that would cabin step 2’s inventive concept test to that narrow set of patent claims that actually raise the concerns that it was created to address.

First, the inventive concept requirement addresses a specific problem inadequately addressed by the Patent Act’s text: the risk that the discoverer of a law of nature could obtain what would amount to a patent

on that law, or that a patentee might monopolize an abstract idea by implementing it on a computer. See *Mayo*, 566 U.S. at 89-91 (reasoning that the inventive concept test performs work that the Act's text is "not equipped to do"); *Bilski*, 561 U.S. at 601 ("these exceptions [to patent-eligibility] are not required by the statutory text"). Respect for the role of Congress in setting policy and for the text as the principal source of law counsel against unduly extending the judge-made inventive concept test to cases that do not pose the threat that justified its creation.

Second, while the inventive concept test theoretically makes sufficiently inventive claims patent-eligible, in practice the confusion associated with the test means that expanding it would do real harm to innovation. The Solicitor General recently wrote that "[t]he confusion created by this Court's recent Section 101 precedents warrants review in an appropriate case." U.S. Br. 8, *Hikma*, No. 18-817; see also Pet. 27-33 (collecting calls for guidance from this Court). And the decision below vividly demonstrates the confusion, uncertainty, and disagreement about how to apply that judge-made test. Requiring every patent that touches on a law of nature to pass through that filter would chill (indeed, is already chilling) innovation in fields at the core of what the patent system was designed to protect.

Alice makes clear that the framework has two steps, meaning that a claim must pass the "inventive concept" test only if it is first found to be "directed to" an ineligible concept. 573 U.S. at 217-18. If every claim that used ineligible concepts were deemed to be "directed to" them, then every claim would proceed to

step 2, for “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.” *Mayo*, 566 U.S. at 71. That would make step 1 a nullity and promote step 2’s “inventive concept” test—an atextual, judge-made standard that has created substantial disagreement and uncertainty—into a universal threshold filter for every patent. It would swallow the Act’s textual requirements, which, after all, are themselves intended to determine whether a claim is sufficiently “inventive.” That was not the intent of *Mayo* and *Alice*. This Court should say so.

III. This is a case of exceptional importance to the proper operation of the patent laws.

Neapco’s argument that the decision below is “fact-bound and narrow” (Opp.10-12) is belied by the strong panel dissent, the deadlock on the petition for rehearing en banc, the five opinions occasioned by that rehearing petition, and the extensive amicus support for the petition for certiorari. *See also* Pet. 2, 15-17, 27-33. Plainly, many of the individuals and firms closest to our patent system see the decision below as a misguided ruling with sweeping implications. Indeed, even Neapco’s own cited article says that “[c]ourts have struggled to apply the two-part *Alice* framework, coming to decisions that are arguably inconsistent and causing many judges and lawyers to throw up their hands and say that the ensuing case law is impossible to understand or apply.” Mark A. Lemley & Samantha Zyontz, *Does Alice Target Patent Trolls?*, J. Empirical Legal Stud., at 4 (forthcoming 2021), <https://bit.ly/31DomFY>. And the Solicitor General takes the clear position that the

Court’s “recent Section 101 decisions have fostered substantial uncertainty,” and that “[t]he confusion created by this Court’s recent Section 101 precedents warrants review in an appropriate case.” U.S. Br. 8, *Hikma*, No. 18-817. This is that case.

The Federal Circuit’s controversial practice of affirming without opinion does not show that the law is uniform or predictable. That court has “categorically reject[ed] the implication ... that [a Circuit Rule 36] affirmance ... provides any information about whether a case was close, frivolous, or noncontroversial.” *Innovation Sciences, LLC v. Amazon.com, Inc.*, --- F. App’x ---, 2021 WL 28216, at *3 (Fed. Cir. Jan. 5, 2021).

Neapco encourages a “common-law approach” to the development of eligibility doctrine. Opp.1. American Axle does not disagree. But this Court’s many eligibility decisions over the past two centuries make clear that it has an important role to play in the case-by-case development of patent law. And the current deadlock in the Federal Circuit makes this Court’s participation indispensable.

Neapco’s suggestion that the Court should leave the problem for Congress to fix (Opp.24-26) is senseless: This Court is surely an appropriate forum to bring clarity to an atextual eligibility test of the Court’s own devising.

Neapco also argues that the Court should not take *any* eligibility case about physical machines and manufacturing processes, and should instead limit itself to the sort of biotechnology and computer patents that it already addressed in *Bilski*, *Mayo*, *Myriad*, and *Alice*. Opp.14-15. But the context of the

claim at issue here—an industrial manufacturing process at the core of what has historically been understood to be patentable—counsels in favor of certiorari, not against. This Court elaborated its eligibility framework in Information Age fields where the concern about improper preemption of laws of nature and abstract ideas is at its zenith. Now, a bitterly divided Federal Circuit has misapplied that framework to invalidate a traditional, Industrial Age claim of the type that has historically been well understood to be patent-eligible. The Court’s intervention is necessary to correct the Federal Circuit’s course and disperse the cloud that now hangs over every industrial patent that uses the laws of nature—that is, all such patents.

IV. This case is the right vehicle.

Neapco argues that this case is a poor vehicle because the patent is supposedly invalid on other grounds. Opp.15-17. The same argument could be made in any case, since eligibility is “a threshold test.” *Bilski*, 561 U.S. at 602. The possibility that a patentee might ultimately lose on other grounds is not a reason to deny review when the threshold test is misapplied. *See also Diehr*, 450 U.S. at 191. Nor is there merit to Neapco’s defenses. Indeed, Neapco’s own emails show that its engineers viewed American Axle’s innovation as novel and nonobvious enough to copy and that the patent enabled them to do so. *See* Pet. 9-10.

V. The second question presented also warrants review.

Courts in patent cases defer to a jury’s finding on the underlying facts while deciding ultimate legal questions de novo. *See Teva Pharms. USA, Inc. v.*

Sandoz, Inc., 574 U.S. 318, 324-28 (2015); *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). The same should hold for the two steps of the *Mayo* framework. Yet the majority below treated step 1 as a pure legal question for the court, and at step 2 it overlooked “many” inventive concepts “about which there exist at least questions of fact which should have precluded summary judgment.” App. 56a (Moore, J., dissenting); see Pet. 32-33, 37-39.

CONCLUSION

The Court should grant certiorari.

Respectfully submitted,

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