In an era of rapid technological progress, copyright law risks becoming outdated. With no guidance from the Supreme Court in over twenty-five years, the application of fair use under the Copyright Act of 1976 — a four-factor statutory defense to copyright infringement claims — has been left largely to the speculation of scholars. This has been particularly troublesome in software, where developers have long been forced to rely on a confusing thicket of interpretations and assumptions lacking concrete legal assurances. A prolonged, multi-trial legal battle between two technology titans recently gave the Court cause to revisit fair use in software. Last Term, in *Google LLC v. Oracle America, Inc.*, the Supreme Court held that Google’s copying of parts of the Java application programming interface (API) in its creation of the Android programming platform was fair use as a matter of law. In reaching this conclusion, the Court took a newly expansive view of transformative-ness in the fair use analysis, recognizing the significance of Google’s “reimplementation” of the Java API in a new context and the value of the third-party creativity the Android platform enabled. Although this development may feed concerns that fair use impinges on the transfor-

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2 17 U.S.C. § 107. The four factors are (1) “the purpose and character of the use,” (2) “the nature of the copyrighted work,” (3) “the amount and substantiality” of the copied portion, and (4) “the effect of the use upon the potential market” for the work. *Id.*
3 See Barton Beebe, *An Empirical Study of U.S. Copyright Fair Use Opinions Updated, 1978–2019*, 10 N.Y.U. J. INTELL. PROP. & ENT. L. 1, 2 (2020); see also *id.* at 3 n.4 (finding that there are generally more law review articles written about fair use in any given year than judicial opinions where a fair use defense is at issue).
6 APIs allow “programmers to use ... prewritten code to build certain functions into their own programs, rather than write their own code to perform those functions from scratch.” *Id.* at 1191 (internal quotations omitted) (quoting Oracle Am., Inc. v Google Inc., 750 F.3d 1339, 1349 (Fed. Cir. 2014)).
7 *Id.* at 1209.
8 *Id.* at 1203. “Reimplementation” was defined as the “‘building of a system ... that repurposes the same words and syntaxes’ of an existing system.” *Id.* (quoting Brief of the R Street Institute et al. as Amici Curiae in Support of Petitioner at 2, *Google*, 141 S. Ct. 1183 (No. 18-956)).
formation central to the derivative works right held exclusively by copyright owners, the Court’s expansion of transformativeness in fair use accords with the constitutional goals of the Copyright Act.

In 2005, Google acquired Android, Inc., signaling the search company’s intent to move into software development for the nascent mobile-device market. To attract “a sizeable number of skilled programmers” to develop applications for Google’s Android-based smartphones, Google wanted its platform to take advantage of programmers’ familiarity with the popular Java programming language. It negotiated with Java’s developer Sun Microsystems to license Java technologies, but talks broke down over Sun’s insistence that “all programs written on the Android platform be interoperable.” Google then elected to create its Android platform independently.

However, to ensure that programmers’ familiarity with Java would aid in developing Android applications, Google copied about 11,500 lines of code from the Java API. The Court identified this portion of the API as “declaring code,” which matches a programmer’s typed command to the code that actually performs it. Declaring code also reflects how Java’s creators “arranged and grouped” different tasks, an organizational scheme known as “structure, sequence, and organization” (SSO). The code that actually performs the command, which the Court identified as “implementing code,” accounted for the vast majority of the API that Google created for Android and was independently written by Google. In 2010, Oracle acquired Sun and the copyright to the Java computing platform, which includes the Java API. Oracle filed a suit against Google for copyright and patent infringement soon after.

Following trial, a jury rejected Oracle’s patent claims and found copyright infringement only with respect to “nine lines

10 See Google, 141 S. Ct. at 1190.
11 Id.
12 Id.
13 Id. at 1190–91. “Interoperable” means that the programs would be able to run on any mobile device, regardless of hardware. See id. at 1190.
14 Id. at 1191.
15 Id.; see also id. at 1205 (noting that the copied code comprised 0.4% of the API).
16 Id. at 1192–93. “Declaring code” refers to the code that identifies a command’s name, inputs, and outputs, whereas “implementing code” stands in for “implementations,” the “step-by-step instructions to perform each task.” See Oracle Am., Inc. v. Google Inc., 872 F. Supp. 2d 974, 978, 979 (N.D. Cal. 2012); Brief Amici Curiae of 83 Computer Scientists in Support of Petitioner at 3, Google, 141 S. Ct. 1183 (No. 18-950) [hereinafter Computer Scientists’ Brief].
17 Google, 141 S. Ct. at 1191–92.
18 Id. at 1193.
19 Id. at 1194; Computer Scientists’ Brief, supra note 16, at 7 n.4.
20 Google, 141 S. Ct. at 1194.
of code,"21 but could not agree on “whether Google could successfully assert a fair use defense.”22 The district court held for Google that the API portion it had copied was an unprotected method of operation under the Copyright Act.23 Both parties appealed.24

The Federal Circuit affirmed in part and reversed in part.25 It found that the declaring code and the SSO were copyrightable because Google was not bound to the naming conventions and structure of the Java API.26 Thus, Google could have written its own declaring code.27 Finding an insufficient record for a de novo review of Google’s fair use defense, the court remanded for another trial on that question.28 The Supreme Court denied Google’s petition for a writ of certiorari.29

A second jury then found that Google’s use of the Java API had been fair.30 The district court denied Oracle’s motion for judgment as a matter of law, finding that the jury could “reasonably have found for either side on . . . fair use.”31 Oracle renewed its motion, adding a motion for a new trial, which the district court also denied.32 Oracle appealed.33

The Federal Circuit reversed and remanded again.34 The court concluded that the question of “whether the use at issue is ultimately a fair one is . . . review[ed] de novo.”35 The court proceeded to reject the jury’s findings in favor of Google on three of the four fair use factors.36 The balance tipped back in favor of Oracle’s favor, and the court found that Google’s

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21 Oracle, 872 F. Supp. 2d at 976.
22 Google, 141 S. Ct. at 1194. The jury’s decision on the patent claims was not appealed, and the claims played no further substantive role in this case. See id. However, because they were initially a part of the lawsuit, all subsequent appeals went to the Federal Circuit, which has exclusive jurisdiction over patent claims. See Peter S. Menell, API Copyrightability Bleak House: Unraveling and Repairing the Oracle v. Google Jurisdictional Mess, 31 BERKELEY TECH. L.J. 1515, 1518 (2016).
23 Oracle, 872 F. Supp. 2d at 999–1000. The portion of the judgment in Oracle’s favor was made with respect to Google’s copying of “certain small snippets of code” otherwise unrelated to the copying of the API. Id. at 976, 982–83.
24 Id. at 1361. The Federal Circuit affirmed the district court’s judgment against Google on the non-API code, finding the company’s arguments of de minimis copying “unpersuasive.” Id. at 1379.
25 Id. at 1377.
26 Id. at 1381.
27 Id.
28 Id. at 1377.
31 Id.
33 Oracle Am., Inc. v. Google LLC, 886 F.3d 1179, 1186 (Fed. Cir. 2018).
34 Id.
35 Id. at 1193.
36 Id. at 1195, 1210. The Federal Circuit held that “no reasonable jury could conclude” (1) that Google’s use of the Java API was transformative, id. at 1201, (2) that what was copied was “qualitatively insignificant,” id. at 1207, and (3) that Oracle suffered “no market harm . . . from Google’s copying,” id. at 1209.
use of the Java API was “not fair as a matter of law.” This time, the Supreme Court granted certiorari. The Supreme Court reversed and remanded, with Justice Breyer writing for the majority. It began by affirming that the constitutional objective of copyright is “to promote the Progress of Science and useful Arts.” After reviewing the statutory background, the Court, to “answer [no] more than [was] necessary to resolve the . . . dispute,” assumed for the sake of argument that the Java API may be copyrightable. The Court also agreed with the Federal Circuit that “‘fair use’ [was] a legal question for judges to decide de novo.” It then dismissed Google’s Seventh Amendment arguments, proceeding to the fair use analysis.

The Court found that all four factors favored Google and held that Google’s copying was fair use as a matter of law. For “expository purposes,” the majority opinion began by examining the second factor: the nature of the copyrighted work. This emphasis constituted a bit of an odd turn for fair use cases, although several Ninth Circuit interoperability cases have placed similar weight on the nature of the work. The functionality of such software makes for thin copyright protection, as it tends to contain minimal creative expression and has generally favored fair use in the past. See Pamela Samuelson & Clark D. Asay, Saving Software’s Fair Use Future, 31 HARV. J.L. & TECH. 535, 558–60 (2018).

Indeed, much of

37 Id. at 1210.
39 Google, 141 S. Ct. at 1209.
40 Justice Breyer was joined by Chief Justice Roberts and Justices Sotomayor, Kagan, Gorsuch and Kavanaugh. Justice Barrett took no part in the deliberations or decision.
41 Google, 141 S. Ct. at 1195 (internal quotations omitted) (quoting U.S. CONST. art. 1, § 8, cl. 8).
42 Id. at 1197. This assumption allowed the Court to limit its analysis to the facts of the dispute, rather than pass judgment on the copyrightability of APIs in general.
43 Id. at 1199.
44 Id. at 1200. These were that the Seventh Amendment right to “trial by jury” (1) entails a prohibition on judicial reexamination, and (2) “includes the right to [jury resolution of] a fair use defense.” Id. (citing U.S. CONST. amend. VII).
45 Id. at 1202, 1204, 1206, 1208.
46 Id. at 1209.
47 Id. at 1201.
48 Google, 141 S. Ct. at 1201.
49 Id. at 1202. The functionality of such software makes for thin copyright protection, as it tends to contain minimal creative expression and has generally favored fair use in the past. See Pamela Samuelson & Clark D. Asay, Saving Software’s Fair Use Future, 31 HARV. J.L. & TECH. 535, 558–60 (2018).
50 Google, 141 S. Ct. at 1202. The Java API was similarly bound up with well-known “specific commands” programmers used to perform functions in Java, which Oracle did not contest, and the implementing code, which was “copyrightable but was not copied.” Id. at 1201.
its value was generated not by the copyright holder, but by the community of programmers taking the time to learn the API. For these reasons, the declaring code was “further than are most computer programs... from the core of copyright,” if it was “copyrightable at all.” The Court thus viewed this factor as weighing in favor of fair use.

Turning to the first factor, the Court next addressed the purpose and character of the use. Drawing on the rule articulated nearly three decades earlier in *Campbell v. Acuff-Rose Music, Inc.*, the majority considered whether Google’s use imbued the copied code “with new expression, meaning or message,” or, more simply, whether it was “transformative.” Justice Breyer noted that the purpose of “virtually any unauthorized use of a copyrighted computer program” will necessarily be functional in service of “accomplish[ing] particular tasks,” just as Google’s was. Ending the inquiry there would thus “severely limit the scope of fair use” for software. As such, he asserted: “[W]e must go further.” To that end, the Court looked to Google’s creation of the entire Android platform, in which it “reimplemented” the API, and all the new products and programming opportunities that Android created in turn. Even allowing that Google’s use was “commercial in nature,” the majority found in favor of fair use on this factor.

In addressing the third factor — the amount and substantiality of the use — the majority noted that when the amount copied is “tethered to a [copier’s] valid, transformative purpose,” the factor will “generally weigh in favor of fair use.” Here, the Court characterized Google’s “basic objective” as allowing programmers to use their pre-existing knowledge of the Java API to create new programs for Android. As declaring code was the “key” to “unlock[ing] the programmers’ creative energies,” this factor weighed in favor of fair use.

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51 *Id.* at 1202.
52 *Id.*
53 *Id.*
54 *Id.*
56 *Google*, 141 S. Ct. at 1202 (quoting *Campbell*, 510 U.S. at 579).
57 *Id.* at 1203 (quoting *Campbell*, 510 U.S. at 579).
58 *Id.*
59 *Id.*
60 *Id.*
61 *See id.* at 1203–04.
62 *Id.* at 1204. The Court recognized that good faith is another consideration “often taken up under the first factor” but expressed “skepticism” that it was helpful in a fair use analysis. *Id.* Because of “the strength of the other factors,” the Court deemed good faith “not determinative.” *Id.*
63 *Id.* at 1205 (citing *Campbell v. Acuff-Rose Music, Inc.*, 510 U.S. 569, 586–87 (1994)).
64 *Id.*
65 *Id.*
66 *Id.* at 1206.
Finally, the Court reached the fourth factor, assessing the potential market harm from Google’s copying. The Court noted that the “potential loss of revenue [was] not the whole story,” and that it also had to consider “the source of the loss” in addition to any “public benefits the copying [would] likely produce.”67 While the Court conceded that Google made a “vast amount of money” from Android,68 it returned to the idea that the value Google derived from using the API was generated by “programmers’[] investment in Sun Java programs.”69 These two considerations, in combination with “creativity-related harms to the public” that might result from copyright enforcement, convinced the majority that the fourth factor weighed in favor of fair use as well.70 As such, the Court declared Google’s copying fair use as a matter of law.71

Justice Thomas dissented.72 He asserted that the majority skipped over the copyrightability analysis, thereby ignoring “half the relevant statutory text and distort[ing] its fair-use analysis.”73 He argued that by failing to analyze the Copyright Act’s definition of a copyrightable “computer program,”74 the Court created a distinction between implementing and declaring code that Congress had previously “rejected.”75 The dissent went on to critique the majority’s analysis of the fair use factors and concluded that three of the four “weigh[ed] decidedly against Google.”76

Google v. Oracle has been hailed as a “huge win for developers and consumers,”77 not to mention a “win for innovation” more broadly.78 Despite the majority’s reluctance to rule directly on the question of API copyrightability, this case’s holding will “provide[] breathing room” to software developers employing similar strategies to create their products.79 However, because transformativeness was likely determinative of fair use here, the Court’s analysis may appear to some to impinge on the derivative works right belonging exclusively to the copyright holder.

67 Id. The majority concluded that even if Google had not copied portions of the Java API, “it would have been difficult for Sun to enter the smartphone market.” Id. at 1207.
68 Id. at 1207.
69 Id. at 1208.
70 Id.
71 Id. at 1209.
72 Justice Thomas was joined by Justice Alito.
73 Google, 141 S. Ct. at 1211 (Thomas, J., dissenting).
74 Id. at 1212 (quoting 17 U.S.C. § 109(b)).
75 Id. at 1213.
76 Id. at 1220.
79 Id.
under the Copyright Act. The Act defines derivative works as those “based upon one or more preexisting works,” such that the original has been “recast, transformed, or adapted.” Since findings of both an infringement of the derivative works right and a valid fair use defense to copyright infringement entail a transformativeness analysis, the debate over which serves to limit the other is ongoing. The Court’s expansive view of transformativeness in the fair use inquiry rightly placed a further limit on the derivative works right, allowing for broader applications of fair use in service of copyright’s goal of promoting innovation.

Transformativeness has become virtually dispositive of fair use findings since the Court introduced it. In , the Court used the word “transformative” to describe the purpose and character of a fair use, and it explicitly stated that “the more transformative” a work, the less “other factors, like commercialism,” will weigh against a fair use finding. Truly transformative works, the Court wrote, would “lie at the heart of the fair use doctrine’s guarantee of breathing space within the confines of copyright” while “generally further[ing]” copyright’s constitutional goals. Courts employ “transformative use” to conceptualize the level of creative input required for a fair use defense to succeed. The concept’s growing centrality to the fair use analysis has, predictably, made it critical to copyright stakeholders and litigators.

Given this increasing reliance on transformativeness, courts have attempted to draw an administrable line dividing the contexts of derivative works and fair use. Lower courts have largely come to treat transformation in derivative works as “changes of form” and transformation

80 See 17 U.S.C. § 106(2); see also , supra note 9.
82 Compare Pamela Samuelson, The Quest for a Sound Conception of Copyright’s Derivative Work Right, 101 GEO. L.J. 1505, 1563 (2013) (concluding that “courts have kept the derivative work right within sound boundaries”), with John Tehranian, Et Tu, Fair Use? The Triumph of Natural-Law Copyright, 38 U.C. DAVIS L. REV. 465, 466 (2005) (arguing that the fair use doctrine fails to effectively limit copyright owners’ rights).
85 Id.; see also Matthew Sag, Predicting Fair Use, 73 OHIO ST. L.J. 47, 56–57 (2012) (indicating that lower courts have followed this direction).
86 , 510 U.S. at 579.
87 See Amanda Reid, Copyright Policy as Catalyst and Barrier to Innovation and Free Expression, 68 CATH. U. L. REV. 33, 80 (2018) (noting that “[m]odern fair use analysis” focuses on whether the “use is transformative”).
88 The importance of transformative use is further emphasized in district courts because “very few litigants make it past the district court,” such that “what happens . . . at the district court level will often be the end result.” Clark D. Asay, Arielle Sloan & Dean Sobczak, Is Transformative Use Eating the World?, 61 B.C. L. REV. 905, 913 (2020).
in fair use as changes in purpose. For example, translating a book into a new language or recording a text into an audiobook might constitute changes in form, falling within the derivative works right of the original copyright owner. This is because the overall message of the work remains unchanged, despite the additional effort or creativity required to make the derivative work. However, taking several pages of the same written text and crossing out certain words to convert the prose into a work of erasure poetry would likely constitute a change in purpose, thereby supporting a finding of fair use, especially if the message of the new poem consisted of commentary on or critique of the underlying work.

Some courts have nonetheless objected to the predominance of the transformative use analysis, fearing that it will supersede the derivative works right entirely. Kienitz v. Sconnie Nation LLC, which concerned a photographer’s infringement action against a company that sold apparel incorporating one of his photos, contained a rare, explicit judicial recognition of the tension between fair use and the derivative works right. The Kienitz court expressed skepticism of the Second Circuit’s treatment of transformativeness as dispositive of the fair use inquiry, fearing that excessive focus thereon “not only replaces the [other fair use factors] but also could override [statutory protections for] derivative works.” The Seventh Circuit asserted that “[t]o say that a new use transforms the work is precisely to say that it is derivative.” Justice Thomas expressed similar worries in his Google dissent.

89 See Authors Guild v. Google, Inc., 804 F.3d 202, 215–16 (2d Cir. 2015); Authors Guild v. HathiTrust, 755 F.3d 87, 95 (2d Cir. 2014).
90 See Google, 804 F.3d at 215.
91 See HathiTrust, 755 F.3d at 96. Notably, this formulation is consistent with the other statutory bases for constituting a derivative work: “recast[ing]” and “adapt[ation].” 17 U.S.C. § 101.
92 See James Flynn, Entitled to Copyright Erasure?: A Fair Use Search for a Derived Yet Transformational Work, JDS UPRA (Apr. 7, 2021), https://www.jdsupra.com/legalnews/entitled-to-copyright-erasure-a-fair-1710301/ [https://perma.cc/Z58L-63Y7]. Several courts of appeal have also indicated that the “provision of [additional] information” about an underlying work, including promoting the distribution of such work, is a transformative purpose supporting fair use. Google, 804 F.3d at 216 n.17 (collecting cases to this effect).
93 766 F.3d 756 (7th Cir. 2014).
94 Id. at 757–58; see also R. Anthony Reese, Transformativeness and the Derivative Work Right, 31 COLUM. J.L. & ARTS 467, 471 (2008) ("Only one appellate decision since Campbell has expressly addressed the relationship between derivative works as works that have ‘transformed’ the expression in an underlying work and the ‘transformativeness’ relevant to fair use analysis.").
95 Kienitz, 766 F.3d at 758.
96 Id.
97 Google, 141 S. Ct. at 1219 (Thomas, J., dissenting) ("To be transformative, a work must do something fundamentally different from the original. A work that simply serves the same purpose in a new context — which the majority concedes is true here — is derivative, not transformative.").
However, the *Kienitz* court’s definition of derivative use — as any “new use [that] transforms the work”98 — is itself an example of courts’ tendency to enlarge an already overbroad derivative works right. In the late nineteenth century, copyright expanded to include certain derivative uses that previously belonged to the public domain.99 Since then, copyright protections have broadened through statutory expansions,100 leading many to characterize copyright legislation as a “one-way ratchet” in the direction of increased protections.101 Courts have exacerbated this trend by untethering the final clause of derivative works’ statutory definition — consisting of “any other form in which the work is recast, transformed, or adapted”102 — from the nine specific examples of derivative use provided by the rest of the definition.103 The result, as exemplified by *Kienitz*, has been the equation of transformation as generically understood with derivative use as a copyright term of art.

Given the overbreadth of the derivative works right, the Court’s expansion of transformativeness for the purposes of the fair use inquiry in *Google* brings an overly restrictive copyright doctrine back into the proper equilibrium.104 Contrary to much of the handwringing about the harms to authors from fair use impingements on the derivative works right, fair use’s expansion in the 1990s is a relatively recent development,105 and it has been to the clear benefit of innovation, especially for software.106 Just as an overexpansive conception of transformative use can threaten the derivative works right, an overexpansive view of what constitutes a derivative work can threaten fair use. Thus, to the extent its conception of transformativeness expanded into territory previously occupied by derivative works, the Court only reasserted the proper “breathing space” in the face of previous overbroad constructions.107

Against this backdrop, the *Google* Court correctly adopted an expansive view of transformative use in two important ways. First, it treated

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98 *Kienitz*, 766 F.3d at 758.
99 See Neil Weinstock Netanel, *Copyright and a Democratic Civil Society*, 106 YALE L.J. 283, 301–02, 304 (1996) (“[C]opyright’s expansion into the area of derivative uses . . . reflects a recharacterization as protected expression of what used to be considered public domain ideas.” *Id.* at 304).
101 See Reid, *supra* note 87, at 40 n.46 (listing copyright scholars that have adopted this phrasing).
104 See, e.g., Reid, *supra* note 87, at 33–34 (noting that copyright is meant to balance the “tension between a copyright holder’s right to exclude and a downstream creator’s freedom of expression,” *id.* at 34).
105 PATRICIA AUFDERHEIDE & PETER JASZI, *RECLAIMING FAIR USE: HOW TO PUT BALANCE BACK IN COPYRIGHT* 88 (2d ed. 2018).
107 Campbell v. Acuff-Rose Music, Inc., 510 U.S. 569, 579 (1994); see Samuelson, *supra* note 82, at 1515 (noting that there is “no evidence in the legislative history that Congress intended an unlimited expansion of the scope of the [derivative works] right”).
Google’s end goal of enabling future creative works by third-party developers as a transformative purpose independent from the particular function for which Google reimplemented the Java API. In seeking “to expand the use and usefulness of Android-based smartphones” by offering “programmers a highly creative and innovative [new] tool for a smartphone environment,” Google engaged in precisely the kind of innovation contemplated by the Copyright Clause. Second, the Court held that even exact copies serving the same purpose as the original may constitute fair uses where they occur in sufficiently different contexts — in this case a “distinct and different computing environment.” This emphasis on the shift from computers to smartphones is tied to the “change in form” that courts have identified with derivative works in other contexts. However, the Court’s disaggregation of “form” into copied content and altered context was correct in recognizing the importance of this distinction in the software realm, where similar reimplementations have long been a key ingredient of innovation.

While Google signals an expansion in the scope of fair use, it also takes a necessary step to realign modern copyright law with its constitutional goals. The scope of the fair use doctrine has undoubtedly expanded since the Court’s last fair use decision in Campbell, but this shift occurred in response to a copyright status quo that was overly restrictive in the first place, and could well become so again. The majority’s reasoning will give lower courts the freedom to consider clearly transformative uses that would otherwise be masked by the functional nature of software. It will allow them to do the same in less cutting-edge circumstances, but with similarly positive results for innovation. While restricting the rights of copyright holders, the Court’s approach took an important step to further the constitutional goal of copyright law: to “promote the Progress of Science and useful Arts.”

108 Google, 141 S. Ct. at 1203.
109 Id.
110 See cases cited supra note 89.
111 Computer Scientists’ Brief, supra note 16, at 3-4.
113 See Andy Warhol Found. for the Visual Arts, Inc. v. Goldsmith, 992 F.3d 99, 111 (2d Cir. 2021) (finding that derivative works are “specifically excluded from the scope of fair use”).
115 U.S. CONST. art. 1, § 8, cl. 8.