

Fall 10-10-2022

Life After Google v. Oracle: Three Reflections on a Theme

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Lim, Daryl (2022) "Life After Google v. Oracle: Three Reflections on a Theme," *IP Theory*: Vol. 12: Iss. 1, Article 3.

Available at: <https://www.repository.law.indiana.edu/ipt/vol12/iss1/3>

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IP Theory

**LIFE AFTER
GOOGLE V.
ORACLE:
THREE
REFLECTIONS
ON A THEME**

Volume 12 | Issue 1

Daryl Lim
2022-2023

LIFE AFTER *GOOGLE V. ORACLE*:
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* Professor of Law & Director, Center for Intellectual Property, Information and Privacy Law, University of Illinois Chicago School of Law. I thank Mark Janis for the opportunity to contribute this essay, written for “Marshall Law,” a workshop honoring the career of Professor Marshall Leaffer. This Article adapts ideas from earlier work, including *The Influence of Alice*, 105 MINN. L. REV. HEADNOTES 345 (2021) and *Saving Substantial Similarity*, 73 FLA. L. REV. 591 (2021).

LIFE AFTER *GOOGLE V. ORACLE*:
THREE REFLECTIONS ON A THEME

Daryl Lim

In 2004, Professor Leaffer published an article titled Life after Eldred: The Supreme Court and the Future of Copyright. He wrote about three cases decided in or after 2001 to provide a snapshot of the Supreme Court's position on copyright issues. This Article discusses three reflections on this theme. The first reflection flows directly from Google. It discusses fair use in Andy Warhol Found. for Visual Arts, Inc. v. Goldsmith, as well as text and data mining for artificial intelligence uses. This Article then reflects on Arnstein v. Porter's lessons for modern copyright infringement law. Finally, it reflects on the current state of software protection at the intersection of patent and copyright law in light of Alice Corp. Pty. v. CLS Bank Int'l.

INTRODUCTION

In 2004, Professor Leaffer published an article titled *Life After Eldred: The Supreme Court and the Future of Copyright*.¹ He wrote about three cases decided during or after 2001 to provide a snapshot of the Supreme Court's position on copyright issues. The three cases were *Eldred v. Ashcroft*,² *New York Times Co. v. Tasini*,³ and *Dastar v. Twentieth Century Fox Film Corp.*⁴ He offered thoughts on the Court's direction and what those decisions might mean for the future of copyright law.

Two of those cases, *Eldred* and *Tasini*, did not discuss fair use, but Professor Leaffer noted their implications on fair use. With *Eldred*, Professor Leaffer disapproved of the Court's term extension endorsement but noted that "perhaps more important for the future of copyright is the Court's reaffirmation that the fair use doctrine enables copyright to pass muster under the First Amendment."⁵

Professor Leaffer approved of *Tasini*'s view on copyright in the contents of a newspaper database, noting that the Court refused to adopt a position of "digital exceptionalism."⁶ Professor Leaffer wrote that "anti-DMCA forces may be pleasantly surprised and take sustenance from the view expressed that just because you call something 'digital,' that does not rule out the traditional limitations and balances embedded in copyright law."⁷

In 2021, fair use was very much on the Supreme Court's mind: the case was *Google LLC v. Oracle Am., Inc.*⁸ For a decision that capped off a multibillion-dollar copyright lawsuit of the decade, the Court made a relatively narrow ruling. In a 6–2 decision authored by Justice Breyer, the Court found that the code at issue—roughly 11,500 lines of "declaring code" from the Java Application Programming Interface—was copyrightable.⁹

Second, the Court held that Google's use of Oracle's code to build the Android smartphone operating system was fair.¹⁰ In fact, it was transformative.¹¹ The Court also found that the code's value derived more from the coding community's growing familiarity with it rather than from the

¹ Marshall Leaffer, *Life After Eldred: The Supreme Court and the Future of Copyright*, 30 WM. MITCHELL L. REV. 1597 (2004).

² 537 U.S. 186 (2003).

³ 533 U.S. 483 (2001).

⁴ 539 U.S. 23 (2003).

⁵ Leaffer, *supra* note 1, at 1616.

⁶ *Id.*

⁷ *Id.*

⁸ 141 S. Ct. 1183 (2021).

⁹ *Id.* at 1197.

¹⁰ *Id.* at 1209.

¹¹ *Id.* at 1204.

expressive features that copyright is intended to protect.¹² The decision offered plenty of helpful language for future litigants, particularly programmers that want to “reimplement” application program interfaces (APIs).¹³ Equally significant was the Court’s finding that fair use “can play an important role in determining the lawful scope of a computer program copyright.”¹⁴ Moreover, while jury findings of fact may be given weight, the doctrine’s application is ultimately a legal question to be decided by the trial judge and reviewed de novo on appeal.¹⁵

So, what does life look like after *Google v. Oracle*? Following Professor Leaffer’s lead, this Article answers that question with three cases. First, using *Andy Warhol Found. for Visual Arts, Inc. v. Goldsmith*, this Article discusses fair use as well as text and data mining for artificial intelligence uses (“AI”).¹⁶ Second, this Article uses *Arnstein v. Porter* to discuss the current state of substantial similarity the lynchpin of copyright infringement.¹⁷ Third, using *Alice Corp. Pty. v. CLS Bank Int’l*, this Article discusses the current state of software protection at the intersection of patent and copyright law.¹⁸

I. WARHOL

Appropriation art uses pre-existing works to create new artwork.¹⁹ Section 106 of the Copyright Act confers exclusive rights to copyright owners to reproduce their work and create derivative works, subject to fair use.²⁰ The Andy Warhol Foundation sought a declaratory judgment against photographer Lynn Goldsmith, who created a portrait of Prince.²¹ Vanity Fair licensed the photograph for \$400 “to Vanity Fair magazine for use as an artist reference.”²² Vanity Fair commissioned Andy Warhol to create an illustration based on the photograph and it published Warhol’s illustration to accompany an article about Prince in Vanity Fair.²³ The illustration published in Vanity Fair was one of a series of silkscreen paintings, prints, and drawings Warhol

¹² *Id.* at 1205.

¹³ *Id.* at 1204.

¹⁴ *Id.* at 1198.

¹⁵ *Id.* at 1199.

¹⁶ 11 F.4th 26 (2d Cir. 2021).

¹⁷ 154 F.2d 464 (2d Cir. 1946).

¹⁸ 573 U.S. 208 (2014).

¹⁹ *Appropriation*, ARTSY, <https://www.artsy.net/gene/appropriation> [<https://perma.cc/SVU7-3BZR>].

²⁰ 17 U.S.C. §§ 106–107.

²¹ *Warhol*, 11 F.4th at 34.

²² *Id.*

²³ *Id.*

created based on Goldsmith's photograph.²⁴

The Second Circuit held that adding Warhol's "signature style" to the photo did not make it transformative, and neither did simply claiming a "higher or different artistic use."²⁵ The Second Circuit quoted the Supreme Court's characterization of transformativeness: "whether the new work merely supersedes the objects of the original creation, or instead adds something new, with a further purpose or different character, altering the first with new expression, meaning, or message."²⁶

The Second Circuit acknowledged that "an overly liberal standard of transformativeness, such as that employed by the district court in this case, risks crowding out statutory protections for derivative works."²⁷ Transformative purpose and character must do more than impose another artist's style on the primary work "such that the secondary work remains both recognizably deriving from, and retaining the essential elements of, its source material."²⁸ Here, Warhol's revisions to Goldsmith's photograph altered the medium, but "the Goldsmith Photograph remains the recognizable foundation upon which the Prince Series is built."²⁹

Warhol follows a line of cases holding that fair use does not lend itself to bright-line rules.³⁰ Instead, those cases have focused on the physical and purpose transformation of a work to provide new character and expression.³¹ As Michael Goodyear noted, "[e]ven as recognizable of a style as Warhol's is not enough, by itself, to create new meaning or message in a secondary work. . . . [T]he more modifications and additions an artist makes to the original work, the better the odds of achieving fair use."³²

Warhol related to artistic work, but *Google* suggests an openness to a fair use argument in the context of expanding access to a platform or allowing the use of products on a new platform. Google used limited portions of a highly popular programming language, valued more for its familiarity than its

²⁴ *Id.*

²⁵ *Id.* at 41.

²⁶ *Id.* at 37.

²⁷ *Id.* at 39.

²⁸ *Id.* at 42.

²⁹ *Id.* at 43.

³⁰ See, e.g., *Campbell v. Acuff-Rose Music Inc.*, 510 U.S. 569, 577–78 (1994) (fair use inquiry is "not to be simplified with bright-line rules"); *Dr. Seuss Enters., L.P. v. ComicMix LLC*, 983 F.3d 443, 451 (9th Cir. 2020) (courts should avoid bright-line rules and categories of presumptively fair use); *Cariou v. Prince*, 714 F.3d 694, 705 (2d Cir. 2013) (recognizing that the "fair use determination is an open-ended and context-sensitive inquiry").

³¹ See Jiarui Liu, *An Empirical Study of Transformative Use in Copyright Law*, 22 STAN. TECH. L. REV. 163, 169–70 (2019).

³² Michael P. Goodyear, *The Transformation of Appropriation Art in the Second Circuit*, 30 NYSBA BRIGHT IDEAS, Sept. 24, 2021, at 1, 6.

creative expression. The Court found fair use even though the defendant used the copyrighted content in a commercial venture.

In the United States, text and data mining may be an infringement of copyright in the underlying work, or it may be fair use, depending on facts and circumstances.³³ The U.S. Patent and Trademark Office's recent Report on AI, noted how some respondents suggested new mechanisms to address licensing and compensation for the use of digitized content for machine learning.³⁴ According to the Report,

[a]dvocates for authors have suggested that when copyrighted works are used as inputs into AI systems to train the AI to create works of authorship or engage in other activities that result in remuneration, the authors should be entitled to a share of the revenues generated by the AI. The recognition sought is not attribution but rather remuneration.³⁵

The problem with relying on fair use, an affirmative defense, is that parties cannot know in advance if the use of those works is permissible. This forces parties to make difficult calculations and deter socially productive conduct. For instance, text and data mining enables analyzing large datasets and producing much of the core benefits of AI.³⁶ Text and data miners scan databases of protected content owned by others to learn and develop new products.³⁷ However, doing so risks infringing copyright subsisting in copyrighted works.³⁸

The Singapore government recently carved out a text and data mining exception to copyright infringement.³⁹ Commentators expect that this safe harbor will significantly increase the availability of training data for AI programs.⁴⁰ In addition, the exception recognizes that computational data

³³ See generally Michael W. Carroll, *Copyright and the Progress of Science: Why Text and Data Mining Is Lawful*, 53 U.C. DAVIS L. REV. 893 (2019).

³⁴ U.S. PATENT & TRADEMARK OFFICE, PUBLIC VIEWS ON ARTIFICIAL INTELLIGENCE AND INTELLECTUAL PROPERTY POLICY 23–24 (Oct. 2020).

³⁵ *Id.*

³⁶ See Daryl Lim, *AI & IP: Innovation & Creativity in an Age of Accelerated Change*, 52 AKRON L. REV. 813, 874 (2018).

³⁷ *Id.*

³⁸ *Id.*

³⁹ Copyright Act 2021 § 244 (No. 22 of 2021) (Sing.).

⁴⁰ Alban Kang & Pin Ping Oh, *Coming Up in Singapore: New Copyright Exception for Text and Data Mining*, LEXOLOGY (Sept. 20, 2021), <https://www.lexology.com/library/detail.aspx?g=1ce9c997-22a1-4953-bd0b-68a95d31bc89> [<https://perma.cc/K3CX-D7AF>]. See also Raj Joshua Thomas, *Second Reading of the Copyright Bill*, SINGAPORE PARLIAMENT (Sept. 13, 2021), <https://sprs.parl.gov.sg/search/sprs3topic?reportid=bill-524> [<https://perma.cc/N8RN-GKXF>] (“This will allow for aggregation and analysis of data for such purposes as sentiment analysis or machine learning. These, ultimately, have a public interest aspect to synthesize data for better understanding of, for example, social or economic trends. Importantly, this will support the development of technologies in machine learning and

analysis treats copyrighted works as data and does not exploit the works' expressive nature, which is what copyright protects.⁴¹ In short, because computational data analysis does not capitalize upon the expressive nature of the works, it does not adversely affect the rights owners' reputational and commercial interests.

Both commercial and non-commercial actors enjoy protection under the exception in Singapore.⁴² There is no limitation for the purpose.⁴³ The exception covers both research teams and third-party vendors.⁴⁴ Its impetus to encourage greater use of text and data mining to businesses aims to reap the benefits of data mining by significantly lowering the cost of associated research and AI development performed in Singapore.⁴⁵

The exception covers all copyrighted works, including textual works and sound and images. Contracts cannot exclude or modify it. As the Singaporean Minister explained during the Parliamentary debate of the Bill:

The benefit of data analysis improves as the set of underlying data used is as complete as possible. Having specific databases locked out of the analysis because of contractual restrictions would make the results less useful, or worse, create bias or inaccuracies. Therefore, it is important not to allow private contractual provisions to override this permitted use. It supports the development of useful applications of data analysis, which is indispensable to the current digital economy.⁴⁶

The Singaporean legislation voids contractual terms attempting to do so, both prospectively and retroactively.⁴⁷ The exception applies both to Singapore law-governed contracts and contracts governed by any law "where the choice of [] law is wholly or mainly to evade [] copyright exception."⁴⁸ A key limitation is that the user must have acquired lawful access to a copy of the work.⁴⁹ However, if the first copy is an infringing copy and the user did not know this, the legislation provides an excuse.⁵⁰ In addition, the mined work must be publicly available online or via a subscription and may not be

deep learning, which, by their very nature, require the input of a voracious volume of data. The permitted use will allow access to this data without having to seek approval or licensing from each copyright owner, which may be a significant obstacle.")

⁴¹ Edwin Tong, *Second Reading of the Copyright Bill*, SINGAPORE PARLIAMENT (Sept. 13, 2021), <https://sprs.parl.gov.sg/search/sprs3topic?reportid=bill-524> [<https://perma.cc/N8RN-GKXF>].

⁴² Copyright Act 2021 § 187 (No. 22 of 2021) (Sing.).

⁴³ Kang & Oh, *supra* note 40.

⁴⁴ Copyright Act 2021 § 187 (No. 22 of 2021) (Sing.).

⁴⁵ Tong, *supra* note 41.

⁴⁶ *Id.*

⁴⁷ Kang & Oh, *supra* note 40.

⁴⁸ *Id.*

⁴⁹ *Id.*

⁵⁰ *Id.*

accessed by circumventing paywall or copy protection mechanisms.⁵¹ As a nation interested in leading the AI revolution like the U.S., Singapore's experience will be instructive.

Who can rely on the exception and for what purposes?	Both commercial and non-commercial organisations can avail themselves of the exception, and there is no limitation as to the purposes for which TDM may be performed.
What works?	The exception applies to all types of copyrighted works, including literary, artistic, musical, and dramatic works, sound recordings and films, as well as recordings of performances. Therefore, the exception applies not just to textual works, but also sound and images.
What acts?	<p>The permitted acts include reproducing works for the purpose of "computational data analysis"; and transmitting the works to other persons for the purpose of verifying the results of the analysis carried out by the latter, or collaborative research or study relating to the purpose of such analysis carried out by the latter.</p> <p>"Computational data analysis" is defined in the Bill to include:</p> <p>using a computer program to identify, extract and analyse information or data from the work; and</p> <p>using the work as an example of a type of information or data to improve the functioning of a computer program in relation to that type of information or data (with a specific example being the use of images to train an AI program to recognise images).</p> <p>The definition is non-exhaustive, which potentially leaves room for arguing that other ancillary activities also fall within the scope of the exception.</p>
What conditions?	However, the exception will only apply if (a) the user had "lawful access" to the copy of the work which he accessed (the "first copy"); and (b) in general, if the first copy is an infringing copy, the user did not know this.
No contractual override	<p>Finally, the exception cannot be excluded or modified by contract. Any contractual term that purports to exclude or restrict the operation of the exception will be void and unenforceable.</p> <p>This prohibition against contractual override applies not only to contracts concluded after the changes are enacted, but also existing contracts. It also applies not only to Singapore law-governed contracts, but also contracts governed by foreign law "where the choice of foreign law is wholly or mainly to evade any copyright exception".</p>

Figure 1: Summary of Singapore's Text and Data Mining Exception.⁵²

Google also invites us to consider the broader question of how copyright meshes with software. The Court was uncomfortable with dissecting expressive and non-expressive codes. It confessed that "[t]he fact that computer programs are primarily functional makes it difficult to apply

⁵¹ *Id.*

⁵² Kang & Oh, *supra* note 40.

traditional copyright concepts.”⁵³ On one hand, the Copyright Act provides that a “computer program”—which it defines as “a set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result”—can be copyrighted.⁵⁴ On the other hand, it expressly excludes copyright protection for “any idea, procedure, process, system, method of operation, concept, principle, or discovery.”⁵⁵ How can that line be drawn in a way that would not effectively disqualify most computer programs from protection? The answer to that question has implications to substantial similarity too, which is discussed in the second case—*Arnstein*.

II. *ARNSTEIN*

Today, copyright plaintiffs have only a one-in-ten chance of winning substantial similarity disputes—the worst in a century.⁵⁶ Courts require plaintiffs to prove that they have a valid copyright in work and that the defendant wrongfully copied from the plaintiff’s copyrighted work.⁵⁷ Judging substantial similarity is daunting because the fact finder must distinguish copyrightable expression from unprotected factual descriptions without linguistic aids like those found in patent claims. Moreover, the doctrinal patchwork of rules juxtaposed on a factually intensive inquiry produces a morass of unclear precedent almost by default.

The substantial similarity inquiry seeks to determine whether two works share a similar copyrightable expression that one infringes upon the other, making the copying wrongful.⁵⁸ The inquiry rests on the nature of the alleged infringement, a court’s preferred substantial similarity test, and the limits to substantial similarity—whether the defendant copied unprotectable content, as well as the amount and importance of the material that the defendant copied from the plaintiff’s work.⁵⁹ The problem, however, is that protectable elements of any work can be dissected until almost nothing remains but its unprotectable parts and case law provides little indication of where to stop in the reductionist analysis.⁶⁰

In *Arnstein*, composer Ira Arnstein sued Cole Porter for infringing copies of his songs, including unpublished ones.⁶¹ These songs ranged from a million copies sold to a copy kept in Arnstein’s room that had been ransacked

⁵³ *Google*, 141 S. Ct. at 1208.

⁵⁴ 17 U.S.C.A. § 101 (1990).

⁵⁵ *Id.* § 102(b).

⁵⁶ See Daryl Lim, *Saving Substantial Similarity*, 73 FLA. L. REV. 591 (2021).

⁵⁷ *Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 361 (1991).

⁵⁸ *Castle Rock Ent., Inc. v. Carol Publ’g Grp., Inc.*, 150 F.3d 132, 138 (2d Cir. 1998).

⁵⁹ *Nichols v. Universal Pictures Corp.*, 45 F.2d 119, 120 (2d Cir. 1930).

⁶⁰ See *Apple Comput., Inc. v. Microsoft Corp.*, 35 F.3d 1435, 1446 (9th Cir. 1994).

⁶¹ *Arnstein*, 154 F.2d at 467.

on several occasions in “burglaries” that the defendant “could have” had something to do with.⁶² There was no direct evidence Porter had ever seen or heard Arnstein's compositions.⁶³ Porter moved for summary judgment, claiming to have never heard Arnstein's song.

Arnstein made three key contributions. Its initial and most important contribution was how the standard for “improper appropriation,” which courts eventually renamed “substantial similarity,” should be judged. *Arnstein* clarified that expert testimony and dissections of the works are “irrelevant” to this determination.⁶⁴ Instead, the ordinary observer should evaluate the works’ overall effect and compare them in a single process without dissecting them into individual elements.⁶⁵ The final judgment should be made based on a lay listener’s impression of the impropriety of the appropriation.⁶⁶

Arnstein’s second crucial contribution involved who should judge substantial similarity. The Court stated, “[s]urely, then, we have an issue of fact which a jury is peculiarly fitted to determine.”⁶⁷ The Court noted:

The impression made on the refined ears of musical experts or their views as to the musical excellence of plaintiff’s or defendant’s works are utterly immaterial on the issue of misappropriation; for the views of such persons are caviar to the general [public]—and plaintiff’s and defendant’s compositions are not caviar.⁶⁸

Arnstein’s third crucial contribution is what substantial similarity would cover. Arnstein was a composer but sought relief against Porter's phonorecords and public performances of his plagiarized works.⁶⁹ They were not direct rivals. In other words, the *Arnstein* test looked at both the economic and technical aspects of the similarities.⁷⁰ In contrast to the technical aspects discussed above, the economic aspects focus more on whether the parties are rivals. Where the defendant used the entire work or made an identical copy, there is no need to compare the parties' works in a substantial similarity analysis.⁷¹ Where the works have similar expressive elements, this general similarity in “total concept and feel” could include defendants who copied plot elements and characters from a play into a motion picture.⁷²

Modern courts’ abandonment of the *Arnstein* ordinary observer test in

⁶² *Id.*

⁶³ *Id.*

⁶⁴ *See id.* at 468.

⁶⁵ *See id.* at 473.

⁶⁶ *See id.* at 472–75.

⁶⁷ *See id.* at 473.

⁶⁸ *Id.*

⁶⁹ *Id.* at 467.

⁷⁰ *See id.* at 469, 473.

⁷¹ *E.g.*, *Range Rd. Music, Inc. v. E. Coast Foods, Inc.*, 668 F.3d 1148, 1154 (9th Cir. 2012).

⁷² *See, e.g.*, *Nichols*, 45 F.2d at 121.

favor of the “more discerning ordinary observer” test or *Sid & Marty*’s intrinsic/extrinsic test creates a significant reason for plaintiffs’ current woes.⁷³ As I argued elsewhere, pretrial motions are also particularly inappropriate to dispose of a substantial similarity argument.⁷⁴ The underlying facts and the weight of inferences are likely to be in dispute. The mixed question should be treated more like a question of fact (and thus for the jury) than one of law (and thus for the judge, including a summary or final judgment once the jury has provided its fact-finding). One judge’s opinion on inference in the substantial similarity analysis may not reflect the consensus opinion of a jury. Pretrial motions may foreclose plaintiffs from realizing an otherwise meritorious cause of action. A judge who disposes of a substantial similarity argument on a pretrial motion runs a real risk of ignoring the wide disparity of opinion that arises in the fact-finding process in understanding of lay juror perceptions of similarity.

Arnstein intersects with *Google* in two ways. First, software’s functional nature makes applying *Arnstein* difficult. *Google* shows unease with dissection, but judging software holistically is difficult too; so, as with fair use, the nature of software may make normal rules of substantial similarity difficult to transpose from the arts into technology. Second, the decline in plaintiff win rates indicated a spike in judges summarily deciding infringement without jury trials.⁷⁵ One reason is that judges do not trust juries can splice expression from an idea.⁷⁶ So, where does it leave us with protecting software? That brings us to the third and final case—*Alice*.

III. ALICE

Alice concerned whether a computer-implemented, electronic escrow service for facilitating financial transactions was patent-eligible subject matter.⁷⁷ According to Section 101 of the Patent Act, “any new and useful process, machine, manufacture, or composition of matter, or any new and

⁷³ See Lim, *supra* note 56, at 610. See also *Sid & Marty Krofft Television Prods., Inc. v. McDonald’s Corp.*, 562 F.2d 1157 (9th Cir. 1977). The two-step procedure first determined whether defendants took only ideas—the “extrinsic” portion because it “depends not on the responses of the trier of fact, but on specific criteria which can be listed and analyzed” by experts if necessary. *Id.* at 1164. Second, it would determine whether substantial similarity existed between the expressions—a test labeled “intrinsic” because it “depend[s] on the response of the ordinary reasonable person” rather than “the type of external criteria and analysis which marks the extrinsic test.” *Id.*

⁷⁴ See Lim, *supra* note, 56, at 608.

⁷⁵ See Lim, *supra* note, 56, at 627–28.

⁷⁶ *Id.*

⁷⁷ *Alice Corp.*, 573 U.S. at 212.

useful improvement thereof” is patent eligible.⁷⁸ To this broad mandate, the Supreme Court carved out exceptions such as “laws of nature” and “abstract ideas” to prevent patenting of “basic tools of scientific and technological work.”⁷⁹

The Court also recognized that applying exceptions too broadly would undermine the purpose of patent law since “all inventions at some level embody, use, reflect, rest upon, or apply laws of nature, natural phenomena, or abstract ideas.”⁸⁰ For this reason, claims directed to applying a judicial exception may be patent eligible.⁸¹ Accordingly, “an invention is not rendered ineligible for patent simply because it involves an abstract concept.”⁸² Specifically, the Court distinguished between “patents that claim laws of nature, natural phenomena, and abstract ideas [and] those that claim patent-eligible applications of those concepts.”⁸³

The Court attempted to articulate a two-part test operationalizing this dichotomy: (1) whether the claims were directed to judicially created exceptions to patent eligibility; and, (2) if so, whether the claim elements individually and in combination, sufficiently provided an “inventive concept” that ensures the patent constitutes “significantly more” than a patent on the underlying judicial exception to avoid claiming, for instance, the abstract idea itself.⁸⁴

Reasonable minds can differ as to whether an invention is “directed to” undefined judicial exceptions like an “abstract idea” or an “inventive concept.”⁸⁵ For instance, though “labor” or “investment” in developing technology is generally insufficient to qualify, the Federal Circuit has used the economic investment to justify its conclusion that the claimed invention was not “conventional, routine, and well-understood” under *Alice*.⁸⁶ Unfortunately, *Alice* itself provides no operative anchor for an inherently subjective inquiry based primarily on the patent claims at issue and the Court’s views of those claims.⁸⁷

Patent scholars fret about *Alice*’s dampening effect on innovation, stating that the holding would nudge inventors to rely on trade secret law.⁸⁸ Another

⁷⁸ *Id.* at 216 (citing 35 U.S.C. § 101).

⁷⁹ *See* *Gottschalk v. Benson*, 409 U.S. 63, 67 (1972).

⁸⁰ *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 71 (2012).

⁸¹ *Diamond v. Diehr*, 450 U.S. 175, 187 (1981).

⁸² *Alice Corp.*, 573 U.S. at 217.

⁸³ *See id.*

⁸⁴ *Id.* at 212, 225.

⁸⁵ Austin Paalz, *Patent Wars: The Attack of Blockchain*, 28 TEX. INTELL. PROP. L.J. 241, 260 (2020).

⁸⁶ *Exergen Corp. v. Kaz USA, Inc.*, 725 F. App’x 959, 966 (Fed. Cir. 2018).

⁸⁷ *See* Paalz, *supra* note 85, at 259.

⁸⁸ Jay P. Kesan & Runhua Wang, *Eligible Subject Matter at the Patent Office: An*

is that trade secret law is not satisfactory: unlike patents, trade secret robs the public of the disclosure function—to teach those skilled in the art how to make and use the invention.⁸⁹ Moreover, whereas patent law has an inbuilt, one-year grace period to file for a patent, trade secret owners need to rely on inherently leaky non-disclosure agreements. It also makes the timeline for obtaining a return on investment is relatively limited, which can hinder information exchange, reduce opportunities to secure financing, and ultimately impede the ability to bring a device to the market.

Cases like *Alice* and *Google* challenge us to consider whether it might be time to rethink intellectual property protection for software, or at least the form that it takes. One option is to see software as a service and not wring our hands about how to fit it into copyright or patent law. *Vernor v. Autodesk, Inc.* reminded us as much.⁹⁰

The Ninth Circuit in *Vernor* held that a copyright owner retained title to the software despite the “significant transfer restrictions” it imposed on buyers of its software packages, including that it was non-transferable, it contained geographical use restrictions, and its termination was predicated upon unauthorized copying or failure to comply with license restrictions.⁹¹ As a licensee rather than an owner of a copy of the software, the defendant cannot even to resell copies under the first sale doctrine.⁹² The Ninth Circuit rejected the “economic realities” that customers possessed copies of their software indefinitely without recurring license payments as evidence of owning them.⁹³ The operating system animating an iPhone, for instance, belongs to Apple Corp., not to the device’s purchaser. The Court ruled that the architectural firm was a licensee, not an owner of a particular copy of the AutoCad packages, and therefore cannot resell under the agreement.⁹⁴

CONCLUSION

So, what is life like after *Google*? This Article discussed three reflections on theme. First, with fair use—*Warhol* suggests that the liberal application of transformative use there may be limited to highly functional works with borderline copyrightability spun into an industry standard, and those seeking

Empirical Study of the Influence of Alice on Patent Examiners and Patent Applicants, 105 MINN. L. REV. 527, 530 (2020).

⁸⁹ 35 U.S.C. § 101.

⁹⁰ 621 F.3d 1102, 1111–12 (9th Cir. 2010). See also Daryl Lim, *Self-Replicating Technologies and the Challenge for the Patent and Antitrust Laws*, 32 CARDOZO ARTS & ENT. L.J. 131, 196 (2013) (discussing *Vernor*).

⁹¹ *Vernor*, 621 F.3d at 1111.

⁹² *Id.* at 1112.

⁹³ *Id.*

⁹⁴ *Id.* at 1116.

to plead the same for appropriation art will have to meet a higher, or different, standard. When the fuel for the race to be technologically competitive is data, idiosyncratic outcomes are risky and unwise. A statutory exemption like Singapore's brings the balance and clarity those AI stakeholders need.

Second, substantial similarity remains systemically stacked against defendants. *Arnstein* provides a roadmap for how to judge substantial similarity, who should judge it, and what it would cover. Third, *Alice*'s decimating influence on patents and patent applications has been far-reaching, metastasizing to cover a host of diverse industries.⁹⁵ Its long shadow looms over every stage of a patent's life cycle—from prosecution to litigation and the administrative post-grant process at the patent office.

Google affirms that software is protectable by copyright, but methods of operation are free to use—a good balance. As Jane Ginsburg put it, “the fair use determination achieved the same result as ruling the APIs uncopyrightable, but attained that objective through the back end of a copyright exception rather than the front end of applying the idea/expression distinction to ascertain the scope of protectable expression”⁹⁶ For that reason, the Supreme Court in *Google* stated that “fair use can play an important role in determining the lawful scope of a computer program copyright.”⁹⁷

In reflecting on life after *Eldred*, Professor Leaffer observed, “[t]he future may be grey, but it is certainly not black.”⁹⁸ He was optimistic that each of those three cases he reviewed—*Eldred*, *Tasini*, and *Dastar*—“may prove to be the key in reaffirming the traditional checks and balances of copyright law.”⁹⁹ In Professor Leaffer's words, “I find the decisions to be sensible from a jurisprudential standpoint.”¹⁰⁰ That sensibility grounded in “a more generalized pragmatic, instrumentalist approach to the law and belief that the ultimate goal of any constitutional jurisprudence is the enhancement of social welfare, an important aspect of which is consumer welfare, as defined from an economic standpoint.”¹⁰¹ As a blend of optimism and proof of things not seen, Professor Leaffer's reassuring faith in the copyright system is welcome as law evolves to meet new demands of technology, commerce, and culture.

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⁹⁵ See Daryl Lim, *The Influence of Alice*, 105 MINN. L. REV. HEADNOTES 345 (2021).

⁹⁶ Jane Ginsburg, *Letter from the US, Part I: The Fair Use Pendulum Oscillates*, REVUE INTERNATIONALE DU DROIT D'AUTEUR 19 (Oct. 2021) (forthcoming).

⁹⁷ *Google*, 141 S. Ct. at 1198.

⁹⁸ Leaffer, *supra* note 1, at 1616.

⁹⁹ *Id.*

¹⁰⁰ *Id.* at 1598.

¹⁰¹ *Id.*