

University of Pennsylvania Carey Law School

## Penn Carey Law: Legal Scholarship Repository

---

All Faculty Scholarship

Faculty Works

---

2014

### Judging Similarity

Shyamkrishna Balganesh

*University of Pennsylvania Carey Law School*

Irina D. Manta

*Hofstra University*

Tess Wilkinson-Ryan

*University of Pennsylvania Carey Law School*

Follow this and additional works at: [https://scholarship.law.upenn.edu/faculty\\_scholarship](https://scholarship.law.upenn.edu/faculty_scholarship)



Part of the [Applied Behavior Analysis Commons](#), [Behavioral Economics Commons](#), [Cognitive Psychology Commons](#), [Intellectual Property Law Commons](#), [Law and Psychology Commons](#), and the [Public Law and Legal Theory Commons](#)

---

#### Repository Citation

Balganesh, Shyamkrishna; Manta, Irina D.; and Wilkinson-Ryan, Tess, "Judging Similarity" (2014). *All Faculty Scholarship*. 1185.

[https://scholarship.law.upenn.edu/faculty\\_scholarship/1185](https://scholarship.law.upenn.edu/faculty_scholarship/1185)

This Article is brought to you for free and open access by the Faculty Works at Penn Carey Law: Legal Scholarship Repository. It has been accepted for inclusion in All Faculty Scholarship by an authorized administrator of Penn Carey Law: Legal Scholarship Repository. For more information, please contact [biddlerepos@law.upenn.edu](mailto:biddlerepos@law.upenn.edu).

# Judging Similarity

*Shyamkrishna Balganeshe,\* Irina D. Manta,\*\* & Tess Wilkinson-Ryan\*\*\**

*ABSTRACT: Copyright law’s requirement of substantial similarity requires a court to satisfy itself that a defendant’s copying, even when shown to exist as a factual matter, is quantitatively and qualitatively enough to render it actionable as infringement. By the time a jury reaches the question of substantial similarity, however, the court has usually heard and analyzed a good deal of evidence about: the plaintiff, the defendant, the creativity involved, the process through which the work was created, the reasons for which the work was produced, the defendant’s own creative efforts and behavior, and, on occasion, the market effects of the defendant’s copying. Despite having this large body of evidence before it, the jury is required to answer the question of substantial similarity through a mere comparison of the two works. In this Essay, we report results from a series of experiments in which subjects were presented with a pair of images and asked to assess the similarity between the two works using the criteria ordinarily given to fact-finders for the substantial similarity determination. When provided with additional information about the simple fact of copying, or about the amount of creative effort that went into the protected work, we saw an appreciable variation (i.e., upwards) in subjects’ assessments of similarity between the works, suggesting that fact-finders are sensitive to additional information about the two works and the creators who produced them, contrary to what current law assumes. Our study suggests that the availability and salience of such additional information actively distorts fact-finders’ assessments of the similarity between the two works, calling into question the purported objectivity of the substantial similarity requirement as a whole.*

---

\* Professor of Law, University of Pennsylvania Law School.

\*\* Associate Professor of Law, Maurice A. Deane School of Law at Hofstra University.

\*\*\* Assistant Professor of Law and Psychology, University of Pennsylvania Law School.

Many thanks to Kristin Firth, Penn Law Class of 2016, for her outstanding research assistance. We would also like to thank Chris Buccafusco, Jonah Gelbach, Gideon Parchomovsky, Dotan Oliar, and participants at the 2014 Annual Conference of the American Law & Economics Association (“ALEA”) at the University of Chicago and the 2014 Intellectual Property Scholars Conference (“IPSC”) at the University of California–Berkeley School of Law for their helpful comments and suggestions.

INTRODUCTION.....	268
I. SUBSTANTIAL SIMILARITY: THEORY AND PRACTICE.....	272
A. <i>THE TEST</i> .....	272
B. <i>THE PROBLEM</i> .....	275
II. EXPERIMENTAL METHODS AND RESULTS.....	278
A. <i>STUDY 1</i> .....	279
1. Methods.....	279
2. Results.....	280
B. <i>STUDY 2</i> .....	282
1. Methods.....	282
2. Results.....	283
III. DISCUSSION.....	284
A. <i>PSYCHOLOGICAL MECHANISMS FOR DISTORTED SIMILARITY</i> <i>JUDGMENTS</i> .....	285
B. <i>LABOR AND FREE-RIDING AS DISTORTIONARY INTUITIONS</i> .....	287
CONCLUSION.....	288

## INTRODUCTION

Fair use is commonly described as copyright law’s “most troublesome” doctrine, in large part due to its open-endedness and uncertainty.<sup>1</sup> In practice, though, the complexities of the fair use doctrine pale in comparison to what is central to almost all cases of copyright infringement: the question of “substantial similarity.”<sup>2</sup> Premised on the idea that “[n]ot all copying . . . is copyright infringement,”<sup>3</sup> copyright law’s substantial similarity doctrine requires a plaintiff to satisfy a court that a defendant’s copying is quantitatively and qualitatively enough like the original to render it actionable as infringement. The defendant’s copying, in other words, needs to result in a copy that is “substantially similar” to the plaintiff’s protected work for the copying to be actionable.

Determining whether two things are alike may seem like a simple task, but the substantial similarity requirement has been besieged by a host of problems, most of which derive from the reality that current copyright

---

1. See *Dellar v. Samuel Goldwyn, Inc.*, 104 F.2d 661, 662 (2d Cir. 1939).

2. See generally Mark A. Lemley, *Our Bizarre System for Proving Copyright Infringement*, 57 J. COPYRIGHT SOC’Y U.S.A. 719, 719 (2010) (noting how it lies at the heart of copyright infringement, and yet that there exist “surprising differences” in the working of the doctrine).

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

jurisprudence treats it as a fairly straightforward question of fact. Indeed, the case that originally developed the requirement described it as merely asking whether the defendant's "copying . . . went so far as to constitute improper appropriation," and mandated that the question be presented to a jury to decide.<sup>4</sup> The jury is supposed to simply determine whether a defendant's copying rose to the level of an "illicit" or "unlawful" act, through the perspective of an "ordinary observer" or "lay listener."<sup>5</sup> In practice, however, the structure of the inquiry makes it quite complex.

In the ordinary sequence of things, the question of substantial similarity arises once a plaintiff establishes first that she owns a valid copyright in the work, and second that the defendant did in actuality copy from the protected work.<sup>6</sup> Establishing ownership of the work in turn requires showing both that the plaintiff owns the work and that the work itself qualifies for copyright protection.<sup>7</sup> If the work qualifies for protection and the plaintiff has a valid ownership interest in it, the court then looks to evidence on the question of whether the defendant actually copied from the protected work. This question too is treated as a factual question. It is left to the jury, except that the law allows courts to admit the testimony of experts on the creative area in question.<sup>8</sup>

Consequently, by the time a court reaches the question of substantial similarity, the jury has heard and analyzed a good deal of evidence about: the plaintiff, the defendant, the creativity involved, the process through which the work was created, the reasons for which the work was produced, the defendant's own creative efforts and behavior, and, on occasion, the market effects of the defendant's copying. Although the similarity finding is meant to involve no more than a comparison of the two works to assess whether they are sufficiently similar to render the copying problematic (i.e., improper), that judgment may be affected by the availability of this other evidence. The fact-finder—a court during a bench trial or the jury ordinarily—is required to answer the question of substantial similarity through a mere comparison of the two works, which will often involve actively ignoring intuitively relevant and highly salient information. Copyright law thus seems to assume that the question of substantial similarity can continue to remain a simple comparison of the two works, even in the face of extensive factual evidence that bears directly on the dispute in question. The fact-finder is presumed to be able to cabin and exclude from the analysis all of the evidence with which the court has been presented in the lead-up to the issue of substantial similarity.

---

4. *Arnstein v. Porter*, 154 F.2d 464, 468–69 (2d Cir. 1946).

5. *Id.* at 472–73; *see also* *Universal Athletic Sales Co. v. Salkeld*, 511 F.2d 904, 907 (3d Cir. 1975).

6. 4 MELVILLE B. NIMMER & DAVID NIMMER, *NIMMER ON COPYRIGHT* § 13.01 (2014) [hereinafter *NIMMER*].

7. *Id.* § 13.01(A).

8. *Arnstein*, 154 F.2d at 469 (noting that copying "is an issue of fact").

In examining this sequence of steps, one scholar of copyright law has thus characterized the substantial similarity inquiry as being “bizarre” and as making “no sense.”<sup>9</sup> It relegates to the fact-finder questions that require nuanced understandings not only of the artistic context, but also of the legal framework—the kinds of questions that in other areas of the law are typically answered by experts.<sup>10</sup> One of us has further suggested that the substantial similarity question, given its place in the overall sequence of the infringement inquiry, is likely to be influenced by a variety of cognitive biases brought by the fact-finder.<sup>11</sup> Indeed, there is even an argument that these kinds of normative judgments may be inevitable, and that copyright law ought to embrace the normative element of substantial similarity. Recognizing that the comparison of similarity is an intrinsically subjective exercise, where the fact-finder is exercising a moral judgment on the wrongfulness of the defendant’s actions using non-utilitarian variables, the substantial similarity test may take on an entirely different, but more practicable meaning. In this study, we test these insights about the similarity determination using a series of experiments.

In other contexts, scholars have known for a long time that ignoring salient information is a very difficult cognitive task.<sup>12</sup> Jurors are frequently called upon to disregard evidence (e.g., marital fault in a custody hearing) or to avoid a natural and even accurate inference (e.g., that arrest is predictive of guilt). Instructions to ignore inadmissible evidence have been under fire for years, and rightly so—there is a substantial body of evidence showing that not only is the information hard to ignore, but that the instruction to ignore can actually have a backlash effect and make the information all the more salient.

The cognitive task implicated by the substantial similarity instruction is somewhat more complex, which is perhaps why it has received less experimental attention. The instruction is not specifically about excluding salient information, but rather about cabinining the inquiry to essentially perceptual stimuli. In some ways, this may explain the psychological naiveté of the rule; we might be inclined to think that the task is more about visual or aural perceptions rather than judgments, and that perception is less subject to contamination. In fact, though, over one hundred years of psychology has shown us various examples of “contaminated” perceptions. Extraneous information can affect the perception of the length of the line on a

---

9. Lemley, *supra* note 2, at 719.

10. Irina D. Manta, *Reasonable Copyright*, 53 B.C. L. REV. 1303, 1336–46 (2012).

11. Shyamkrishna Balganes, *The Normativity of Copying in Copyright Law*, 62 DUKE L.J. 203, 242 (2012).

12. See, e.g., Andrew J. Wistrich, et al., *Can Judges Ignore Inadmissible Information? The Difficulty of Deliberately Disregarding*, 153 U. PA. L. REV. 1251, 1262 (2005).

chalkboard,<sup>13</sup> the events of a football game,<sup>14</sup> or the appearance of a dancing gorilla on a computer screen.<sup>15</sup> Our hypothesis then is that similarities will seem more similar, and dissimilarities less obvious, when the judgment is embedded in a narrative that not only describes the intentional act of making one thing look like another, but that also identifies a wrongdoer.

The two new experimental studies we present below are a first pass at identifying the role of extrinsic evidence in judgments of substantial similarity. The studies have a very straightforward design. In each, we ask subjects to look at a pair of images and report how similar the images are. In a control condition, they have minimal extrinsic information. In the experimental condition, they have an additional fact about the act of copying, the creation of the work, or the consequences of the copying. To preview the results, we found that when provided with additional information about the simple fact of copying or the creative effort that went into the protected work, we saw an appreciable upward shift in subjects' assessments of similarity between the works. This was the case despite the fact that the works remained the same and the subjects were consistently told that they had to base their assessments entirely on the works themselves.

Our results suggest that fact-finders are sensitive to additional information about the two works and the creators who produced them, much along the lines predicted by the critics of the substantial similarity analysis. We posit two mechanisms to explain these results: one based on how the information might affect the allocation of attentional resources and the other based on how information might motivate a particular judgment of similarity.

Part I begins with an overview of copyright law's process of determining copying and the role that substantial similarity plays therein. It first describes the current state of the law (Part I.A) and identifies obvious problems that the literature points to within it (Part I.B), which form the claims that our study investigates. Part II then describes the experimental design of our study, the methodology used, and the results that we obtained. Part III explains what these results mean for copyright law and the infringement inquiry.

---

13. S. E. Asch, *Effects of Group Pressure Upon the Modification and Distortion of Judgments*, in *GROUPS, LEADERSHIP AND MEN* 177–90 (Harold Guetzkow ed., 1951).

14. See Albert H. Hastorf & Hadley Cantril, *They Saw a Game: A Case Study*, 49 *J. ABNORMAL & SOC. PSYCHOL.* 129 (1954) (describing a study that shows that people's perception of a football game was dependent on the way different journalists described the game).

15. Daniel J. Simons & Christopher F. Chabris, *Gorillas in Our Midst: Sustained Inattentional Blindness for Dynamic Events*, 28 *PERCEPTION* 1059 (1999) (discussing an experiment that shows that people are blind to unexpected objects and occurrences even when a man in a gorilla suit is playing basketball on a screen).

## I. SUBSTANTIAL SIMILARITY: THEORY AND PRACTICE

## A. THE TEST

Copyright owners' exclusive rights are described in 17 U.S.C. § 106, and include the rights to reproduce, distribute, publicly perform, publicly display, and digitally transmit the work as well as to prepare derivative works.<sup>16</sup> To show that copyright infringement has occurred, an owner has to show that she owns a copyright and that at least one of the rights listed in section 106 has been violated.<sup>17</sup> Ownership is generally not the critical issue, but rather the existence of a violation is. When the claim consists of an alleged unauthorized reproduction of the work, the plaintiff has to show that her work was copied.<sup>18</sup> Either direct or indirect evidence can be used to prove copying.<sup>19</sup> If two works are similar enough, they are said to be strikingly similar, and proof of access to the original work can be inferred on that basis.<sup>20</sup> Courts have recognized the principle that if access to the original work and a certain level of similarity between works are present, the most logical inference is that copying did indeed take place.<sup>21</sup> Not all copying is actionable, however. For example, copying only small amounts of original expression from a work or copying only elements that are also in the public domain is legal. Copyright law seeks to prohibit *substantial* copying, which can result in a complex determination.<sup>22</sup>

While various circuits have adopted slightly different tests to determine the existence of copyright infringement, many of them fundamentally follow the approach of the U.S. Court of Appeals for the Second Circuit developed in *Arnstein v. Porter*.<sup>23</sup> The songwriter Ira Arnstein accused his colleague Cole Porter of appropriating Arnstein's work for a number of successful songs.<sup>24</sup> The court created a two-step test that requires: (1) evidence of access and similarities sufficient to demonstrate that copying has taken place; and (2) a

---

16. 17 U.S.C. § 106 (2012).

17. *See id.*

18. *See, e.g.*, *Lipton v. Nature Co.*, 71 F.3d 464, 470–71 (2d Cir. 1995).

19. *See, e.g.*, *Jorgensen v. Epic/Sony Records*, 351 F.3d 46, 51 (2d Cir. 2003); *Repp v. Webber*, 132 F.3d 882, 889 (2d Cir. 1997).

20. *See, e.g.*, *Repp*, 132 F.3d at 889. “[T]he stronger the proof of similarity, the less the proof of access that is required.” NIMMER, *supra* note 6, § 13.03(D). *See generally* Alan Latman, “*Probative Similarity*” as Proof of Copying: Toward Dispelling Some Myths in Copyright Infringement, 90 COLUM. L. REV. 1187 (1990) (encouraging the use of probative similarity as part of the standard of proof for copyright infringement cases).

21. Lemley, *supra* note 2, at 720–21.

22. NIMMER, *supra* note 6, § 13.03(A).

23. *Arnstein v. Porter*, 154 F.2d 464, 468–69 (2d Cir. 1946). For an in-depth description of the different tests used across the country, see ROBERT C. OSTERBERG & ERIC C. OSTERBERG, SUBSTANTIAL SIMILARITY IN COPYRIGHT LAW § 3.1–.4 (2004).

24. *See Arnstein*, 154 F.2d at 467–68. Ira Arnstein had a long history of launching copyright infringement lawsuits. *See generally* GARY A. ROSEN, UNFAIR TO GENIUS: THE STRANGE AND LITIGIOUS CAREER OF IRA B. ARNSTEIN (2012).

showing that the copying was illicit and amounts to unlawful appropriation.<sup>25</sup> Unlike for the first step, no expert evidence or dissection of the work is permitted for the second step; rather, courts test the perception of the ordinary observer on this matter.<sup>26</sup> In the *Arnstein* litigation, this meant that the court wanted to know for the second step “whether defendant took from plaintiff’s works so much of what is pleasing to the ears of lay listeners, who comprise the audience for whom such popular music is composed, that defendant wrongfully appropriated something which belongs to the plaintiff.”<sup>27</sup> While the *Arnstein* court specified the importance of gauging the sentiments of the relevant audience, today only the Fourth Circuit explicitly emphasizes that aspect while other circuits tend to speak of the ordinary or reasonable observer more generically.<sup>28</sup>

The Ninth Circuit, which has also implemented a two-step test, takes a slightly different approach from the Second Circuit to the issue of substantial similarity. It introduced its test in the case *Sid & Marty Krofft Television Productions, Inc. v. McDonald’s Corp.* and differentiates between a first “extrinsic” step and a second “intrinsic” step.<sup>29</sup> The extrinsic step establishes probative similarity by determining the similarity of ideas with the help of experts and analytic dissection.<sup>30</sup> The intrinsic step compares the response of the ordinary reasonable person to the expressions in the two works without the use of experts or dissection.<sup>31</sup> The Ninth Circuit later sought to clarify its approach in *Shaw v. Lindheim*, explaining that the extrinsic step was essentially an objective test while the intrinsic step was a subjective test.<sup>32</sup> Courts following the *Shaw* test, however, have introduced quite a bit of confusion by failing to differentiate between “what the jury subjectively experiences with what the hypothetical ordinary observer himself would perceive.”<sup>33</sup> As a related matter, the jury instructions in these contexts show great heterogeneity and frequently fail to distinguish whose perception the legal test and hence the jury should seek to ascertain.<sup>34</sup>

---

25. *Arnstein*, 154 F.2d at 468.

26. *See id.*

27. *Id.* at 473.

28. *See generally* Manta, *supra* note 10, at 1350–51 (critiquing the reasonable man standard presented to jurors and advocating instead for a subjective standard that focuses on the intended audience and social science surveys to show infringement). There is variation on this, with some courts willing to make exceptions if the reasonable observer of a work is far apart from the average juror. *See, e.g.*, *Kohus v. Mariol*, 328 F.3d 848, 857 (6th Cir. 2003).

29. *Sid & Marty Krofft Television Prods., Inc. v. McDonald’s Corp.*, 562 F.2d 1157, 1164 (9th Cir. 1977), *superseded by statute on other grounds*, 17 U.S.C. § 504(b) (2006).

30. *See id.*

31. *See id.*

32. *Shaw v. Lindheim*, 919 F.2d 1353, 1357 (9th Cir. 1990).

33. Manta, *supra* note 10, at 1335.

34. *See id.* at 1335–36.



In presenting the question of similarity to a jury, the substantial similarity tests used in every circuit provide surprisingly little direction on precisely *how* the comparison is to be carried out. Most courts agree that the comparison needs to be conducted holistically, taking into account the work as a whole. Courts describe this as the “total concept and feel”<sup>35</sup> approach to comparing the works, or as the “overall look and feel” approach.<sup>36</sup> The comparison is thus meant to avoid focusing on individual components of the work that might emphasize the dissimilarities over the similarities.<sup>37</sup>

Both the Second and Ninth Circuits, the primary developers of the substantial similarity standard, additionally insist that the test involves both a quantitative and a qualitative dimension.<sup>38</sup> The quantitative dimension entails examining whether the copying crossed a *de minimis* threshold.<sup>39</sup> The qualitative element on the other hand is meant to investigate the value and significance of the copying against the backdrop of the plaintiff’s whole work. In other words, it is meant to scrutinize whether the defendant appropriated aspects of the protected work that are particularly valuable and significant.<sup>40</sup>

Beyond general abstract statements that “[y]ou must consider the qualitative and quantitative significance of the copied portions in relation to the work as a whole,” and that the question is whether “compared to the work as a whole the average audience would not recognize the appropriation,” the test provides little additional instruction to the jury on the process through which it is meant to carry out the comparison.<sup>41</sup> One court thus openly characterized the assessment of similarity as “virtually devoid of analysis” since it involves “a mere subjective judgment” on whether the “two literary works are or are not similar.”<sup>42</sup> Other courts have additionally indicated that the reaction of the ordinary observer that the jury is meant to consider must “be spontaneous and immediate,” which adds a further air of subjectivity and apparent impulsiveness to the similarity comparison.<sup>43</sup> Given this reality, no federal court of appeal today provides district courts with model jury

---

35. *Atari, Inc. v. N. Am. Philips Consumer Elecs. Corp.*, 672 F.2d 607, 614 (7th Cir. 1982), *superseded by statute on other grounds as recognized in* *Hobbs v. John*, 722 F.3d 1089, 1094–95 (7th Cir. 2013) (quoting *Roth Greeting Cards v. United Card Co.*, 429 F.2d 1106, 1110 (9th Cir. 1970)) (internal quotation marks omitted).

36. *Sturdza v. United Arab Emirates*, 281 F.3d 1287, 1296 (D.C. Cir. 2002) (citation omitted) (internal quotation marks omitted).

37. Balganes, *supra* note 11, at 227.

38. *Newton v. Diamond*, 388 F.3d 1189, 1195 (9th Cir. 2004); *Twin Peaks Prods., Inc. v. Publ’ns Int’l, Ltd.*, 996 F.2d 1366, 1376–77 (2d Cir. 1993).

39. *OSTERBERG & OSTERBERG*, *supra* note 23, § 2:4.

40. *Id.*

41. Final Charge to Jury and Special Verdict Form at 14, *Oracle Am., Inc. v. Google, Inc.*, 750 F.3d 1339 (2014) (No. C 10-03561 WHA), *available at* <http://www.groklaw.net/pdf3/OraGoogle-1018.pdf>.

42. *Shaw v. Lindheim*, 919 F.2d 1353, 1357 (9th Cir. 1990).

43. *Peel & Co., Inc. v. Rug Mkt.*, 238 F.3d 391, 398 (5th Cir. 2001).

instructions on the question of substantial similarity. While the Ninth Circuit initially attempted to do so, it eventually withdrew its model instructions. The court's following observation speaks to the abstract and intuitive nature of the test when translated into practice:

The committee concluded that the general statement of the test embodied in the former instruction was not helpful in light of the diverse facts that might arise at trial pertinent to a substantial similarity assessment. The committee also concluded that the court and counsel would be best served by specifically crafting instructions in this area based upon the particular work(s) at issue, the copyright in question, and the evidence developed at trial.<sup>44</sup>

### B. THE PROBLEM

The exact process of scrutiny that a fact-finder is supposed to undertake in applying the substantial similarity analysis remains unclear. Not only does the court/jury conducting the inquiry do so after being presented with evidence about the protected work, the plaintiff's efforts in creating it, and the defendant's own actions in copying, but the contours of the standards guiding the inquiry itself are also grossly imprecise and fuzzy. In practice, therefore, the substantial similarity analysis remains a virtual black box. To date, scholars have only speculated on how courts and juries are likely to go about applying the test given these realities.

We start by unpacking the substantial similarity task put to the fact-finder. There are two parts to this task. The first is a general attempt to determine what is the same and what is different between two works. This seems easy at first; it is literally child's play in the old Sesame Street "One of these Things (Is Not Like the Others)" song.<sup>45</sup> But think of how overwhelming the task would actually be, if broken down into its sub-steps, to try to iterate all the ways in which two images, for example, are different. Should we go pixel-by-pixel? What about stylistic similarities, or thematic similarities? There is a lot of information through which to sort, and a number of similarity "facts" necessarily recruit other kinds of background knowledge.

Of course, even if one could make such a list in a sensible way, there is a second part of the task, which is deciding whether the identified similarities are enough, collectively, to constitute "substantial" similarity. Depending on one's view, "substantial" could reasonably mean anything from "non-trivial" to "more than not" or even "highly." For the purposes of this paper, we leave aside differential understandings of the standard of substantiality and focus

---

44. GEORGE H. KING ET AL., NINTH CIRCUIT JURY INSTRUCTIONS COMM., NINTH CIRCUIT, MANUAL OF MODEL JURY INSTRUCTIONS § 17.17 (2007) (withdrawn).

45. BOB & SUSAN, *One of These Things*, on SESAME STREET: THE SESAME STREET ANNIVERSARY ALBUM (Sesame Street Records 1979).

entirely on perceptions of similarity. But, as we have argued, those judgments alone are complex enough to implicate some of the findings from the bounded rationality literature. When a judgment task is difficult, people often rely on shortcuts or heuristics and are more likely to be swayed by salient factors to the exclusion of other important, but more nuanced considerations.<sup>46</sup>

As such, our investigation begins with the proposition that the substantial similarity test requires jurors and judges to work through a complex and ill-defined cognitive task, and is therefore vulnerable to biased reasoning. In previous work, one of us has argued that as a normative matter, the abstract and open-ended nature of the similarity analysis should be used by courts to infuse copyright law with deontic and other moral considerations as part of their analysis of similarity.<sup>47</sup> The assessment of similarity in this conception is seen “as a proxy for the wrongfulness of the defendant’s actions” when measured against the backdrop of the plaintiff’s creative endeavors.<sup>48</sup> Building on the notion of correlativity<sup>49</sup> that originates in the ideal of corrective justice, this argument suggested that during the similarity inquiry, “the defendant’s actions are examined through the lens of a right-duty relationship between the plaintiff and the defendant.”<sup>50</sup> The fact-finder is thus presumed to be examining how the defendant’s act of appropriating substance and value from the protected work interferes with the author-work connection that is a central part of the plaintiff-creator’s agency/autonomy, and which copyright law might implicitly be seen as protecting.<sup>51</sup> Underlying this theory was the notion that courts (as fact-finders in the inquiry) were using a legal standard (i.e., substantial similarity) to give effect to their moral intuitions about the actions and parties involved, a feature of decision-making in different contexts that another one of us has explored empirically using methods from moral psychology.<sup>52</sup> Moral considerations, specifically those relating to the wrongfulness of a defendant’s actions and the theory suggested, both do and should remain the focus of the similarity analysis,

---

46. For a discussion of how decision-making for ambiguous tasks suffers a greater risk of falling prey to cognitive biases, see Manta, *supra* note 10, at 1339–40.

47. Balganes, *supra* note 11, at 228.

48. *Id.*

49. Correlativity refers to the idea that one actor’s doing and another’s suffering are normatively related to each other, which in turn triggers the need for a restoration of the original equilibrium. See Ernest J. Weinrib, *Corrective Justice*, 77 IOWA L. REV. 403, 417 (1992) (“In corrective justice, . . . the unity of the plaintiff-defendant relationship lies in the very correlativity of doing and suffering harm.”).

50. Balganes, *supra* note 11, at 251.

51. *Id.* at 254.

52. See, e.g., Tess Wilkinson-Ryan & Jonathan Baron, *Moral Judgment and Moral Heuristics in Breach of Contract*, 6 J. EMPIRICAL LEGAL STUD. 405 (2009); Tess Wilkinson-Ryan & Jonathan Baron, *The Effect of Conflicting Moral and Legal Rules on Bargaining Behavior: The Case of No-Fault Divorce*, 37 J. LEGAL STUD. 315 (2008).

which copyright law would do well to openly acknowledge and embrace in its pluralistic structure.<sup>53</sup>

In other work, another one of us has examined the working of substantial similarity to suggest that its structure renders the inquiry open to a variety of cognitive biases. For example, we might think that the fact that a defendant has copied paints him as a bad actor, which thus colors the rest of the judgments required to find liability, a phenomenon sometimes referred to as a “reverse halo effect.”<sup>54</sup> Or the knowledge of copying may affect how jurors search for information about similarity, tending to push them to look for evidence of copying guided by confirmation bias.<sup>55</sup> And, of course, decision-makers in this context are working with the benefits of hindsight, which we know is very hard to ignore. While scholars have in the past acknowledged the presence of hindsight bias in the working of copyright law, the substantial similarity analysis is perhaps most susceptible to its pitfalls, given that the fact-finder is asked to undertake the similarity analysis *after* evidence of actual copying is presented, and indeed a decision as to that question has already been made.<sup>56</sup> This work thus hypothesized that “a legal decisionmaker may draw conscious or subconscious conclusions from a determination of copying, which will increase the chance that he or she will make a finding of substantial similarity.”<sup>57</sup> This suggestion comports with the moral intuition described previously, since it also presumes that the decision-maker implicitly or explicitly disfavors “free-riding” as an intuitive matter. The decision-maker may thus come to incorporate this moral intuition into the similarity analysis and fail to disregard any evidence of copying.<sup>58</sup>

Decision-makers’ use of moral judgments in contexts where the law deems moral considerations altogether irrelevant has shown to be an unavoidable reality in some areas. In particular, this has been demonstrated in the contract law setting, where the law treats breach of contract as premised on strict liability.<sup>59</sup> Despite the fact that a defendant’s “fault” or morally wrongful behavior is meant to play no role in determining breach or in computing expectation damages, decision-makers invariably factor that into their decisions.<sup>60</sup> Moral intuitions often influence the analysis of an objective legal standard.

---

53. Balganesch, *supra* note 11, at 249–57.

54. Manta, *supra* note 10, at 1338–45 (citation omitted) (internal quotation marks omitted).

55. *Id.*

56. *See, e.g., id.* at 1339; Shyamkrishna Balganesch, *Foreseeability and Copyright Incentives*, 122 HARV. L. REV. 1569, 1631–32 (2009).

57. Manta, *supra* note 10, at 1340.

58. *Id.* at 1339–40.

59. Tess Wilkinson-Ryan, *Do Liquidated Damages Encourage Breach? A Psychological Experiment*, 108 MICH. L. REV. 633, 669–71 (2010); *see also* Wilkinson-Ryan & Baron, *Moral Judgment and Moral Heuristics in Breach of Contract*, *supra* note 52.

60. *See* Wilkinson-Ryan & Baron, *Moral Judgment and Moral Heuristics in Breach of Contract*, *supra* note 52.

We should expect to see a similar reliance on moral intuitions about the wrongfulness of copying influencing decision-makers' conclusions on substantial similarity, even though their analysis is meant to operate as a simple comparison of the two works. The wrongfulness of such copying might arise from their moral views on copying as such and from a variety of extrinsic considerations that they might see as influencing its wrongfulness. These may include the value and extent of the creator's labor, the connection between the work and its creator, the market effects of the copying, and the copier's bad-faith behavior. If the similarity analysis is in reality influenced by these considerations, the simplistic observation that liability for copyright infringement is in the end "strict" would seem to be at least partially untrue,<sup>61</sup> and we may want to consider whether and how the law ought to take this into account.

The only previous work to have examined the working of substantial similarity through the use of behavioral experiments has sought to do so in the context of music, where the test is meant to examine the reactions of "lay listeners."<sup>62</sup> Since copyright law protects both compositional and performance-based elements, the study shows that decision-makers are unable to separate the two when asked to undertake the substantial similarity analysis in relation only to one.<sup>63</sup> The study thus found that "playing an audio recording invites the juror to make the wrong comparison by comparing the sound recordings rather than the compositional elements underlying each recording."<sup>64</sup> This preliminary study thus suggests that our intuition is correct that the substantial similarity decision does indeed harbor a variety of external and potentially irrelevant considerations. In this paper, we therefore develop a series of experiments to examine whether and to which extent decision-makers carrying out a similarity analysis employ their intuitive moral judgments about copying to decide the question.

## II. EXPERIMENTAL METHODS AND RESULTS

The studies we report here have a straightforward structure. Using online surveys, we asked participants to make judgments about the similarity of images presented in pairs, varying the information about the creation or copying status of the images experimentally. Subjects made these judgments using a numerical scale and were told that they were only to take into account the images themselves. This means that subjects were not actually making an explicit judgment about substantiality; they were only rating similarity. We

---

61. Shyamkrishna Balganes, *The Obligatory Structure of Copyright Law: Unbundling the Wrong of Copying*, 125 HARV. L. REV. 1664, 1682–84 (2012).

62. Jamie Lund, *An Empirical Examination of the Lay Listener Test in Music Composition Copyright Infringement*, 11 VA. SPORTS & ENT. L.J. 137 (2011).

63. *Id.* at 175.

64. *Id.* at 139.

used subjects drawn from Amazon Mechanical Turk, a commonly used mechanism for recruiting participants in survey experiments.<sup>65</sup>

#### A. STUDY 1

##### 1. Methods

In the first study, we tested the hypothesis that images seem more similar simply by virtue of being copies. Subjects were recruited on Amazon Turk and then directed to a study programmed using the survey software Qualtrics. Each subject was paid one dollar for completing the five-minute questionnaire.

Subjects read the following instruction before seeing the image pairs:

In the scenarios that follow, you will be presented with pairs of works and asked to examine the extent to which you consider them to be similar to each other. You will be asked to indicate your response on a scale of 1 to 7, with 1 being the least similar and 7 being the most similar.

In examining the similarity between the two works, please use the following guidelines:

You must base your answers (on the similarity between the works) entirely on a comparison of the works themselves.

There will no doubt be similarities and dissimilarities between different parts of the two works. You must determine the extent to which, as an observer of the works, you would regard them—as a whole—as similar to one another.

Please assume that the works on the left were created before the works on the right.

Subjects were then randomly assigned to either the independent group or the copy group. After reading the initial instructions, subjects saw the first in a series of eight pairs of images. The order of image pairs was random. Before answering the similarity question, subjects received information about copying. Subjects in the independent group read, “Please assume that the creator of the work on the right did not know about the work on the left during the process of creation.” Subjects in the copy group read, “Please assume that the creator of the work on the right copied from the work on the left during the process of creation.” Note that this means that a given subject

---

65. See generally Winter Mason & Siddharth Suri, *Conducting Behavioral Research on Amazon’s Mechanical Turk*, 44 BEHAV. RES. METHODS 1 (2012); Gabriele Paolacci et al., *Running Experiments on Amazon Mechanical Turk*, 5 JUDGMENT & DECISION MAKING 411 (2010).

saw all images in one condition or the other. An example of the image pairs is pictured below.<sup>66</sup>

Figure 1. Image Pair for the “Rug 2” Item



## 2. Results

Of the 152 subjects who participated, 58.9% were female. Subjects' ages ranged from 19 to 70, with a median age of 31.

This study tested the effect of information about copying on assessments of similarity. As such, our first test was whether, in the aggregate, subjects in the copy group found the image pairs more similar than subjects in the independent group. They did. The mean rating of similarity in the independent group was 4.28, and the mean rating of similarity in the copy group was 4.61. This difference is highly significant ( $W=2179$ ,  $p=.009$ ).<sup>67</sup> As is clear from Table 1 below, the effect size varied significantly by image. Rug 2 and Rug 3 are the only image pairs that showed significant differences by condition when tested separately. Even when those images are removed from

---

66. We sought to include all the images used in the published version of this paper. The Iowa Law Review prohibited us from doing so, on advice of legal counsel, due to concerns over copyright infringement liability. We vehemently disagree with this decision and believe that including the images would have been clearly allowed under the doctrine of fair use. We will make a version of the paper with all images included available to anyone who contacts us.

67. We use a two-sided, non-parametric test of differences here. A non-parametric test does not assume normal distribution of the data. It is a more conservative test of significance than, for example, a t-test. A two-sided test is also somewhat conservative in this case, insofar as our prediction is one-sided—we are predicting, in both studies, that additional information about copying will make the images appear more similar, not just different.

the aggregate analysis, however, the effect of condition remains marginally significant even using a two-way non-parametric test ( $W=2392.5$ ,  $p=.068$ ).

Table 1. Mean Similarity Ratings by Condition

	<b>Independent</b>	<b>Copy</b>
American Gothic	4.84	4.83
Father	4.69	5.03
Accordion	4.10	4.43
Pen Grid	4.45	4.71
New Yorker	3.64	3.85
Rug 1	3.92	4.15
Rug 2	4.08	4.65
Rug 3	3.51	4.20

Overall, these results strongly suggest that the similarity judgment is affected by the mere fact of knowledge of copying.

With this experiment, we are unable to distinguish among the possible mechanisms of this effect. We can imagine two primary explanations for this phenomenon. The first is essentially an attentional explanation—once a person is told that an image is copied, the similarities may be easier to find. Assessing similarity may become a kind of exercise in confirmation bias. The second explanation is one of motivated reasoning. That is, people may find copying morally distasteful and import their preference to punish the copier into their judgment of similarity.

In this particular study, the first explanation is compelling because subjects did not actually have information about the consequences of the similarity judgment. They may have assumed that more similarity would lead to greater liability, but we do not know how they understood the relationship between similarity and liability from this experiment alone. Given the relatively sparse legal and moral context of the judgment task we presented to subjects here, the attentional explanation is particularly plausible.

With Study 2, we brought more legal context to the decision task in order to specifically judge the effect of morally relevant information on judgments of similarity. We explored the kinds of intuitions or biases that may affect judgments of similarity by selectively introducing two types of salient facts about the creation process to subjects in one of the experimental groups.



*B. STUDY 2*

In the second study, we tested two hypotheses that are specifically about how moral intuitions about the unfairness of copying might affect judgments of similarity. We tested the effect of information about high versus low effort invested by the original creator. We separately tested the effect of information about negative versus no change in market demand for the original since the copy became available. Though the general method is the same, in this study we therefore introduced the similarity task with some context for the similarity judgment. To the extent that the similarity judgment is motivated by moral intuitions, the motivation derives from the knowledge that findings of greater similarity are more likely to result in punishment for the copier and/or compensation for the wronged creator.

This study used a single image pair in hopes of eliciting a clean response to a single image pair, as a jury would do in a trial.

*1. Methods*

We had two hypotheses. The first hypothesis was that subjects would find the images more similar when the original was labor-intensive than when the original had required little labor to create. The second hypothesis was that subjects would find the images more similar when the copying had a negative economic impact on the original creator than when the copying had no economic impact on the original creator.

All subjects read the following instructions:

You will be asked to read a set of instructions that are typically shown to juries in copyright infringement cases where the court is trying to determine whether or not to impose liability on someone who has copied another person's copyrighted work. A court that does find liability will either require that the copier pay money damages to the original creator and/or require that the copier stop copying.

When a court considers a copyright infringement claim, it asks the jury to determine whether an original work and a copied work are "substantially similar." If the works are not substantially similar, there is no copyright infringement and thus no liability for the copier, even if the copier did in fact copy from the original work.

In the scenarios that follow, you will be presented with a pair of works and asked to examine the extent to which you consider them to be similar to each other. You will be asked to indicate your response on a scale of 1 to 10, with 1 being the least similar and 10 being the most similar. In examining the similarity between the two works, please use the following guidelines:

You must base your answers (on the similarity between the works) entirely on a comparison of the works themselves.

There will no doubt be similarities and dissimilarities between different parts of the two works. You must determine the extent to which, as an observer of the works, you would regard them—as a whole—as similar to one another.

In this case, assume that the work on the left is the original and the work on the right is the copy.<sup>68</sup>

This study was entirely between-subjects. Each subject made a single judgment about the similarity of the images. Each subject was assigned randomly to one of four conditions: high labor, low labor, market effect, or no market effect. For each condition, each subject was informed as follows:

High-Labor Condition: “The creator of the original spent about two months designing and setting up the shot to get this photograph.”

Low-Labor Condition: “The creator of the original spent about ten minutes designing and setting up the shot to get this photograph.”

Market Effect Condition: “Since the copy has become available, it has had a strong negative effect on demand for prints and licenses of the original. Sales of the original (digital and print) are down by over 60% since the copy came on the market.”

No Market Effect Condition: “Since the copy has become available, it has had no effect on demand for prints and licenses of the original. Sales of the original (digital and print) have not changed since the copy came on the market.”

## 2. Results

Of the 493 subjects recruited via Amazon Mechanical Turk, 66.1% were female. Subjects’ ages ranged from 18 to 66, with a median of 28. They were paid 50¢ to complete a two-minute task. One hundred and forty-one subjects were assigned to either one of the market substitution conditions; 352 subjects were assigned to either one of the labor conditions.<sup>69</sup>

Subjects who saw the high-labor condition rated the photographs as more similar than subjects who saw the low-labor condition. The median similarity rating for the high-labor condition was 8; it was 7 for the low-labor condition. The mean difference was .50 on a ten-point scale (7.2 versus 6.7), which is a significant difference ( $W=13,440.5$ ,  $p=.030$ ). To get a sense of how this shift might show up in real life, it helps to think of it in terms of percentages. As we show in the table below, there is a real downward shift (of about 8.5%) in the number of subjects who find the images relatively dissimilar (below the

---

68. See *supra* Figure 1 for example of an image pair.

69. The uneven distribution across hypotheses was deliberate and used essentially as a cost-saving measure. After we obtained the first set of results, it was clear that the market substitution item showed no differences, so we removed it to increase the power of the test of the labor manipulation.

midpoint, 5, on the scale), and a concomitant upward shift in the subjects who find the images nearly identical (9 or 10 on a ten-point scale).

Table 2.

	Low Labor	High Labor
Mean	6.71	7.21
Median	7	8
% Reporting Dissimilarity (1-5)	25.9%	17.4%
% Reporting Similarity (9-10)	20.1%	28.7%

There was no effect of information about market substitution ( $W=2567$ ,  $p=.970$ ).

### III. DISCUSSION

These studies yielded two major results. The first is that mere knowledge of copying has the tendency to make works seem more similar. The second is that, even when the fact of copying is established, information about the original creator's personal labor investment in the work affects perceptions of similarity, where the copy of a high-labor work is rated as more similar to the original than the copy of a low-labor original work.

Before we begin to think about the explanations and implications of these results, we draw some basic inferences related to the study design. First, there are obviously differences between assessing similarity in an online survey and in a courtroom. It is probably safe to assume that in a court, jurors and judges invest significantly more time and energy in their judgments. And, in a court, the information context is much richer and more complicated. Jurors know a lot about the works by the time they are being asked to assess similarity, and it is possible that the sheer volume of information could dwarf the effect of a single fact about the creator's labor investment.

Though we acknowledge the challenges to generalizing the results of these studies to the real-world context, we think there is reason to find these studies somewhat less problematic from an external validity standpoint than other questionnaire studies. In essence, here, the task is actually nearly identical to the task of judges and jurors in a copyright infringement action—they are asked to look at two images and decide how similar they are. Indeed, we would argue that these results may actually be quite conservative, insofar as there is no overwhelmingly salient information about an aggrieved and sympathetic creator or blatantly self-interested copier. The language used in these studies is fairly terse and neutral, which presumably distinguishes it from the kinds of evidence that would be presented at trial.

A. *PSYCHOLOGICAL MECHANISMS FOR DISTORTED SIMILARITY JUDGMENTS*

While the risk of cognitive bias in the copyright infringement test has been recognized by scholars a number of times, our experiment provides definitive evidence of its existence. Two types of biases may help to explain the results of the first study: attentional biases and motivational biases.

An attentional bias describes a person's tendency to focus on some information and ignore other information in a manner that does not reflect the relative importance of the information for the particular inquiry. We can think of this class of bias as being essentially about salience—a focus on stimuli or attributes that easily capture our attention, for one reason or another. Because the inquiry is framed in terms of similarity and not difference, the tendency may be to search for similarities rather than differences. It is unsurprising in this context that knowledge of copying would exacerbate such a bias because knowledge of copying makes the possibility of similarities more salient, and the subject will actively search for them. This phenomenon is referred to as a “confirmation bias”—the preferential search for information that is congruent with one's hypothesis rather than the more valuable search for information that would falsify. This explanation is particularly apt in the copying context because what we understand copying to be about *is* making things similar. Anchoring is also an attentional bias—lack of attention to updates to a baseline assessment or belief. Here, subjects may have “anchored” on the notion that copied images would be highly similar, and then failed to fully adjust to account for the actual differences in the images.<sup>70</sup> Overall, increased focus on similarities, knowing that the similarities are intentional, should not be especially surprising.<sup>71</sup>

Nonetheless, it is less plausible to think that this kind of attentional bias can explain what is happening in the second study. Why would knowledge of the creator's painstaking labor make similarities to the copy more salient and dissimilarities less salient, especially when the fact of copying is disclosed in both the high and low labor conditions? The goal of the second study was to get at a second explanation for how similarity judgments may be distorted by extrinsic evidence about the creator and the copier.

The second type of bias that the study may be capturing is a form of motivated reasoning grounded in morality considerations.<sup>72</sup> Motivated reasoning is a broad category of biases that might be thought of as wishful

---

70. For more discussion of anchoring, see Jeffrey J. Rachlinski, *The “New” Law and Psychology: A Reply to Critics, Skeptics, and Cautious Supporters*, 85 CORNELL L. REV. 739, 751 n.60 (2000). See generally Colin Miller, *Anchors Away: Why the Anchoring Effect Suggests That Judges Should Be Able to Participate in Plea Discussions*, 54 B.C. L. REV. 1667 (2013).

71. This would be in line with what one of us predicted in previous work. See Manta, *supra* note 10, at 1343–44.

72. Allison Orr Larsen, *Factual Precedents*, 162 U. PA. L. REV. 59, 101 (2013) (explaining that motivated reasoning broadly refers to the tendency to “look for sources to support what we already think we know”).

thinking. The idea is that sometimes people who try to make objective judgments find that their reasoning and inferences are biased toward answers that favor their underlying beliefs and preferences. So, in this case, if copying seems unfair, and copying someone else's hard work even more unfair, we may see increased similarity judgments because subjects and/or jurors are implicitly motivated by the prospect of liability for a bad actor. While legally insufficient to determine a proper finding of infringement, accusations of copying alone conjure negative images of plagiarism and cheating, and hence, the copier is by his nature seen as an unsavory character.<sup>73</sup> Defendants' lawyers may have trouble dispelling this image, especially when plaintiffs' attorneys will do all they can to encourage juries to think of copying and similarity in the same context.<sup>74</sup>

Unlike in a trial setting, where the facts in copyright cases greatly differ from one situation to another, our first study enabled us to isolate the copying element. Nothing changed between the two conditions aside from the statement that the creator of the junior work copied from the original. In that sense, our results are profound. While we cannot state this conclusively, there is reason to believe that the powerful effect of the knowledge of copying may sway decisions on infringement at the margin. We purposefully picked works for our comparisons that were neither near-identical nor entirely unrelated but rather presented a mix of similarities and differences. The types of work pairings likely to go to court rather than be settled or dismissed fall into this category as well. While showing that similarity can legally form part of the evidence to demonstrate copying, the reverse is not the case. We are observing a phenomenon that Barton Beebe has termed "factor stampeding" in the trademark context, where decisions about some elements of a multi-factor test become excessively dependent on decisions on other elements.<sup>75</sup> One could argue that for two works that are quite dissimilar, the force of the stampeding would be insufficient to sway juries to see the works as substantially similar. The number in this subset of cases is likely to be exceedingly small, however, as copying itself will be hard to prove if the works are too dissimilar, short of the rare cases involving "smoking gun" evidence of copying.

It is also conceivable that in some cases, the stampeding of similarity through copying will not be as dramatic if the similarity already played an important role in the determination that copying took place. This may, indeed, alleviate the magnitude of the effect we found in this study, but there remains a great risk that we have replaced the "substantial similarity" test with a "striking similarity" test for the second rather than just the first step of the analysis if that is so. In other words, if in some cases striking similarity leads to

---

73. See Ann Bartow, *Copyrights and Creative Copying*, 1 U. OTTAWA L. & TECH. J. 75, 84–85, 93 (2004).

74. Manta, *supra* note 10, at 1343.

75. See Barton Beebe, *An Empirical Study of the Multifactor Tests for Trademark Infringement*, 94 CALIF. L. REV. 1581, 1614–22 (2006).

a finding of copying, which then—in a non-negligible set of cases at the margin—leads to a finding of substantial similarity that would not have been found but for the evidence of copying, the striking has replaced the substantial. The end result would be a lowered bar for how similar two works have to be for infringement to subsist, which represents a shift toward plaintiffs that the courts responsible for developing the substantial similarity test never anticipated. In any case, our finding that courts are potentially not actually doing what they believe themselves to be doing—i.e., specifically determining whether substantial similarity is present—is reason enough for concern.

*B. LABOR AND FREE-RIDING AS DISTORTIONARY INTUITIONS*

One issue that the first study did not address is—to the extent that motivated reasoning explains the results—which aspect of morality-based determinations drives subjects to import their perceptions of wrongfulness or unfairness into the similarity analysis. Are they concerned about the rights of an owner because of the amount of work she put in? Do they fear that the new work will supplant the old work in the market? We designed the second study to be better able to answer these questions.

The results of our second study suggest that labor-based considerations play an important role in motivating decision-makers' reasoning on the question of similarity. As noted previously, our second study involved giving subjects additional information about the amount of effort (measured in time) that a creator put into creating the work, then asking them to measure the similarity between the original work and the copy. We observed an appreciable upward assessment of similarity when subjects were given a strong labor condition. When presented with information about market substitution, however, subjects displayed no similar variation.

This suggests that labor continues to play an important intuitive and moral role in influencing individuals' reasoning on the similarity question. Unlike in the first study, subjects in the second study were expressly told that the similarity assessment was occurring within the context of a copyright infringement dispute, and that their assessment of similarity would have a direct bearing on the question of liability. This thereby suggests that subjects were indeed engaging in a form of motivated reasoning, because they knew the consequences of their finding—i.e., that the copier would be found liable for copyright infringement. It is plausible that this motivated reasoning was shaping their analysis in one of the following two ways.

In the first, it might have fueled (or indeed triggered) the intuition that the greater expenditure of labor ought to correlate to a stronger property right or ownership interest. Traditionally associated with Lockean ideals, this intuition is thought to map onto people's beliefs about owning the products and fruits of their labor-intensive activities. Some studies suggest that the same intuition explains the endowment effect in certain contexts. In our study, it

would suggest that the subjects simply associated the creator's extensive expenditure of labor with "stronger protection" for the work, which they then translated into a looser standard for similarity, knowing that it would feed directly into the assessment of liability. In an equally plausible second possibility, the expenditure of labor may not have triggered subjects' beliefs about the strength of the property right, but instead directly affected their intuitions about the wrongfulness of the copying. Copying is commonly perceived as a form of free-riding. It is therefore conceivable that the creator's expenditure of labor led subjects to view the copying involved as entailing greater (and more morally outrageous) free-riding, which they treated as wrongful. In a sense then, this interpretation maps on the "reaping without sowing" intuition thought to be at stake in misappropriation cases.<sup>76</sup> It is, of course, also likely that subjects' reasoning was motivated in part by both intuitions.

Perhaps most importantly, though, if our interpretation of subjects' reasoning is correct, it suggests that copyright law and policy have done a poor job of cabining labor-based considerations. In its now notorious decision in *Feist Publications, Inc. v. Rural Telephone Services Co.*, the Supreme Court categorically concluded that "sweat of the brow" considerations—i.e., that "copyright was a reward for . . . hard work"—are largely irrelevant to copyright law, especially in determining whether and how much protection works obtain.<sup>77</sup> While this may be true as a formal matter, our study suggests that decision-makers have a tendency to re-introduce these labor-based considerations during their assessment of similarity as part of the copyright infringement analysis. Our study suggests that instead of claiming to have labor-based considerations play no part whatsoever in its working, copyright law should make a more concerted effort to eliminate such considerations from the different elements of the analysis. Alternatively, the law could embrace the reality that moral intuitions relating to labor and free-riding directly influence the assessment of similarity, which in turn serves as a simple proxy for wrongfulness.

#### CONCLUSION

Substantial similarity plays an important role in copyright adjudication. It allows courts to tailor the precise scope of the copyright owner's rights by determining the amount of copying that the owner should be able to restrict through the law's framework of exclusive rights. Brought into existence in the mid-nineteenth century, it is today an essential component of almost all copyright infringement actions that do not involve outright copying by a

---

76. See Rudolf Callmann, *He Who Reaps Where He Has Not Sown: Unjust Enrichment in the Law of Unfair Competition*, 55 HARV. L. REV. 595 (1942) (detailing this intuition and its role in the hot news misappropriation doctrine).

77. *Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., Inc.*, 499 U.S. 340, 352 (1991).

defendant. Copyright law treats it as a simple factual question, premised on a similarity comparison of the two works, in the rather naïve belief that lay decision-makers (i.e., juries) can cabin the question of similarity from other intuitions that are routinely at play in copyright infringement cases. Our studies show that copyright law is indeed fundamentally misguided in its treatment of the similarity question as being only about the two works at issue.

Our first study reveals that basic knowledge about the act of copying, meaning that one work was copied from the other, greatly influences individuals' assessments of similarity. And since substantial similarity is presented as a question to the jury once copying as a factual matter is shown to exist, the substantial similarity question is structurally skewed in favor of a jury's finding greater—i.e., substantial—similarity between the two works. Our second study shows that in addition to simple knowledge about the copying, additional information about the creator's efforts in producing the work also triggers individuals' intuitions that cause them to find a greater amount of similarity between two works. In some ways, this finding is perhaps more troubling for copyright law because it suggests that juries, who are the decision-makers on the similarity question, are likely introducing variables into the analysis and comparison that copyright law's devices have over the years worked hard to eliminate from consideration altogether. A creator's labor or effort is one such prominent consideration, which copyright jurisprudence in the United States has uniformly jettisoned as irrelevant.

What is perhaps additionally problematic about the finding that decision-makers are influenced by "sweat of the brow" type considerations is the reality that this influence is very likely unknown even to them, since it operates at the level of intuition. Our study therefore suggests the rather distinct possibility that there might indeed be additional such influences at play in subjects' similarity comparisons, most of which ought to be kept out of the copyright system altogether. These might include extra information about the market positions of the plaintiff and defendant, a defendant's bad faith intentions, a defendant's attempt to conceal its copying, the plaintiff's personal affinity (or personalization) of the work, and the like. We hope that future studies will explore the full extent to which these influences cloud the similarity analysis and perhaps cause courts and law-makers to re-evaluate their simplistic treatment of substantial similarity as a question of fact.

At a purely theoretical level, though, our study leads us to conclude that while it may be true as a matter of theory that liability for copyright infringement is indeed "strict," in practice this is perhaps largely untrue. Strict liability is conceived of today as a form of liability that is insensitive to either the defendant's wrongdoing and fault or to the consequences and harm that flow from the defendant's actions.<sup>78</sup> Our study suggests that neither assumption may necessarily hold true in practice, since decision-makers are

---

78. See Balganes, *supra* note 61, at 1682 (describing copyright's structure as a strict liability tort).



indeed “judging” the defendant’s actions in assessing similarity. Given this reality, it is perhaps time for copyright law to reconsider its dogmatic adherence to a model of strict liability—in both theory and practice.