ARTICLE

THIRTY-SIX VIEWS OF COPYRIGHT AUTHORSHIP, BY JACKSON POLLOCK

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ABSTRACT

Humans have long used a variety of tools to convey artistic expression. Perhaps the most recent and mysterious artistic tools are machine learning or "artificially intelligent" (AI) computer systems that have captured popular attention. When taken in isolation, these devices seem to operate autonomously, giving the illusion that there is no author behind their output. In fact, there is a rich web of human effort and support behind any AI undertaking. When we pull aside the AI curtain, it becomes apparent that the attribution of authorship for AI-enabled creations is largely an exercise in tracing legal causation. Indeed, the concept of original expression, which is required for copyright authorship, implies a causal chain tracing the origin of fixed expression. In this Article, I show that concepts of causation, volition, and intention that are familiar from other areas of law also inform copyright authorship, and that the machine learning revolution affords us the opportunity to reveal previously hidden assumptions about copyright authorship. While I will begin by

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illustrating these concepts with examples from the graphic arts, the same principles are readily applied to other authorial works in other media. The result dispels not only the confusion surrounding mechanical creation but a variety of long-standing problems in copyright authorship.

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"It struck me that it would be good to take one thing in life and regard it from many viewpoints, as a focus for my being, and perhaps as a penance for alternatives missed."[1]

I. INTRODUCTION

Copyright scholarship has become increasingly fascinated by debates over the authorship of new works generated by automated "artificially intelligent" or "AI" systems.[2] Such computer systems, largely comprised of statistical optimization or "machine learning" systems,[3] are able to generate new graphics, new music, and new texts, and other apparently creative output.[4] Sometimes the machines can be induced to produce new works in the style of known artists; other times they can be induced to produce works without precedent. The works generated seem to casual observation to satisfy the copyright authorship requirement of fixing original expression in a tangible medium.[5] They seem to raise questions as to whether machines can or should be considered authors for purposes of copyright.

The simplest answer to such questions is, of course, to treat the AI system as one would any other creative tool and assign copyright authorship to whomever designed, programmed, or deployed the machine to generate the resulting work—just as one would assign copyright authorship to whomever employed a paintbrush, saxophone, or word processor to generate a creative

1. ROGER ZELAZNY, 24 VIEWS OF MT. FUJI, BY HOKUSAI, *reprinted in* FROST AND FIRE 201, 243 (1989).

2. Daniel J. Gervais, *The Machine as Author*, 105 IOWA L. REV. 2053 (2020); Margot E. Kaminski, *Authorship, Disrupted: AI Authors in Copyright and First Amendment Law*, 51 U.C. DAVIS L. REV. 589 (2017); Bruce E. Boyden, *Emergent Works*, 39 COLUM. J.L. & ARTS 377, 383 (2016); James Grimmelmann, *There's No Such Thing as a Computer-Authored Work—And It's a Good Thing, Too*, 39 COLUM. J.L. & ARTS 403 (2016); Robert C. Denicola, *Ex Machina: Copyright Protection for Computer-Generated Works*, 69 RUTGERS U. L. REV. 251 (2016); Annemarie Bridy, *Coding Creativity: Copyright and the Artificially Intelligent Author*, 2012 STAN. TECH. L. REV. 5, 25. The question is in fact not terribly new, having been thoroughly vetted over 30 years ago. *See* Pamela Samuelson, *Allocating Ownership Rights in Computer-Generated Works*, 47 U. PITT. L. REV. 1185 (1986) (analyzing the doctrinal and policy implications of allocating AI authorship to the machine, to the user, to the programmer, or to no one).

3. *See* M.C. Elish & danah boyd, *Situating Methods in the Magic of Big Data and AI*, 85 COMMC'N MONOGRAPHS 57, 61–64 (2018) (reviewing the development of current AI technologies).

4. *See* Boyden, *supra* note 2, at 384–85; William T. Ralston, *Copyright in Computer-Composed Music: HAL Meets Handel*, 52 J. COPYRIGHT SOC'Y USA 281, 286–87 (2004).

5. 17 U.S.C. § 102(a).

work.[6] There is never any question of assigning authorship to a paintbrush, saxophone, or word processor, despite their direct involvement in the act of expressive creation. Copyright is rather clearly an entitlement assigned to human creators. This indeed was the conclusion of the Commission on New Uses of Copyright that advised the United States Congress on the provenance of computer-generated works more than forty years ago.[7]

This simple approach to authorship seems to some counterintuitive because AI systems offer the illusion of independent and autonomous creation. Human instigation and direction seem remote or attenuated in the AI context. But recent work by Carys Craig and Ian Kerr reminds us that such systems are deeply embedded in extended networks of human influence.[8] Humans design the software; set the statistical parameters for analysis; curate, choose, and format the training data; and determine the suitability of the algorithmic output.[9] Consideration of the machine in isolation from its extended sociotechnical network lends itself to romanticization of the machine, much as isolation of the human creator from his assemblage of influences once lent itself to romanticization of the human author.[10]

Thus, regarding the machine as author seems unproductive as either a policy or a doctrinal prescription. However, the illusion of AI autonomy may nonetheless prompt valuable discussion regarding the nature of copyright authorship. The mistake in considering autonomous AI creativity is a mistake of framing; AIs seem autonomous in isolation just as a paintbrush or pencil might seem magically and mistakenly autonomous if we were to ignore the human hand that holds it. A broader framing of AI authorship

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6. *See* Samuelson, *supra* note 2, at 1204–05 (concluding that the user of an AI program is the author of the program's output); JOANNA ZYLINSKA, AI ART: MACHINE VISIONS AND WARPED DREAMS 13 (2020) (arguing that human artistry has always been an "artificially intelligent" marriage of person and technology).

7. NAT'L COMM'N ON NEW TECH. USES OF COPYRIGHTED WORKS, FINAL REPORT OF THE NATIONAL COMMISSION ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS 44–46 (1978).

8. *See* Carys Craig & Ian Kerr, The Death of the AI Author 27, 38 (Mar. 25, 2019) (unpublished manuscript), http://dx.doi.org/10.2139/ssrn.3374951 [https://perma.cc/HU2R-84N6].

9. *Cf.* ZYLINSKA, *supra* note 6, at 54–55 (arguing the proper question is not whether machines can be creative, but rather how humans can be creative in the context of AI).

10. *See, e.g.*, James D.A. Boyle, *The Search for an Author: Shakespeare and the Framers*, 37 AM. U. L. REV. 625, 633 (1988); Peter Jaszi, *Toward a Theory of Copyright: The Metamorphoses of "Authorship,"* 1991 DUKE L.J. 455, 462 (1991); Martha Woodmansee, *On the Author Effect: Recovering Collectivity*, 10 CARDOZO ARTS & ENT. L.J. 279, 291 (1992); David Lange, *At Play in the Fields of the Word: Copyright and the Construction of Authorship in the Post-Literate Millennium*, 55 LAW & CONTEMP. PROBS. 139 (1992).

requires us to step back in order to identify and assign authorship among the actors that initiated the machine's activity.

This causal tracing is a useful exercise because it must occur whether or not an AI system is involved. As a practical matter, no expression can or does originate entirely with any particular author. A considerable amount of modern scholarship has gone toward refuting the romantic notion that expression arises *ex nihilo* from the mind of a creative genius.[11] Artists influence, learn, and borrow from one another, from their surroundings, from the cultural milieu in which they are embedded. Ideas and concepts, and the expression of those ideas and concepts at various levels of abstraction can be traced to a wide network of influences. Similarly, no act of fixation occurs in isolation—materials, techniques, and circumstances arise from a wide array of influences that are all antecedent contributors to the act. Like any chain of causation, the antecedent contributing factors may be said to stretch back in time to the Big Bang.[12]

This is a familiar problem from other areas of law where legal responsibility is assigned in whole or part on the basis of causality. In tort law, we are required to choose from among the many causes in fact that contribute to a particular harm which cause or causes we deem legally proximate—which causes are close enough to the harm in space and time and significance to acquire legal responsibility for the outcome.[13] Copyright, too, requires us to select among the many factors contributing the expression of a particular work, to designate a point of legally relevant origin where authorship may attach.[14] That point of origin is effectively the proximate cause of the resulting work and will typically partake of the proximity characteristics of logical nearness and substantiality that are familiar from causal proximity in tort.[15]

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11. *See* sources cited *supra* note 10.

12. *See* W. PAGE KEETON ET AL., PROSSER AND KEETON ON THE LAW OF TORTS, § 41, at 264 (W. Page Keeton ed., 5th ed. 1984) ("In a philosophical sense, the consequences of an act go forward to eternity, and the causes of an event go back to the dawn of human events, and beyond."); WILLIAM L. PROSSER, HANDBOOK OF THE LAW OF TORTS, § 41, at 236 (4th ed. 1971) (stated more poetically, "The fatal trespass done by Eve was cause of all our woe.").

13. *See* Fleming James Jr. & Roger F. Perry, *Legal Cause*, 60 YALE L.J. 761, 811 (1951).

14. *See* Jani McCutcheon, *Natural Causes: When Author Meets Nature in Copyright Law and Art. Some Observations Inspired by* Kelley v. Chicago Park District, 86 U. CIN. L. REV. 707, 716 (2018).

15. *See* Shyamkrishna Balganesh, *Causing Copyright*, 117 COLUM. L. REV. 1, 62 (2017).

Law provides us the conceptual tools to trace the action back from the copyrighted work and to identify the relevant actors and causes for the work's creation. Such tools are most familiar from doctrinal areas other than copyright. And legal causality is only one in a suite of such tools. In this Article, I will argue that copyright authorship is inherently governed by legal concepts familiar from other areas of jurisprudence, such as tort or criminal law. For example, tort and criminal law are organized around combinations of physical acts and mental states.[16] This jurisprudential structure maps at least roughly onto the requirements for authorship under copyright law.[17] Copyright authorship requires both an act—the act of fixing expression in a tangible medium—as well as a type of mental effort or creative activity to originate the expression that is fixed.[18]

Of course, the necessary mental state for copyright authorship, that of formulating or conceiving creative original expression, is quite a different matter from the "desire states" such as intent or purpose, and the "belief states" such as knowledge or ignorance, that we commonly find in criminal law.[19] We shall see that some desire states are helpful in assessing copyright's act requirement, but they are not necessarily required mental states for authorship. The mental state for authorship might perhaps be termed an "imagination state."[20] But if it remains wholly a mental state, in the imagination of the originator, then copyright never attaches. It must be expressed via fixation in a tangible medium, and in tracing the act of fixation back to its originator, intent and volition are often implicated; accidental expression is not impossible, but typically the author must exercise some purposeful action for authorial fixation to occur.

Consequently, concepts of actual and proximate cause, intent, and volition all necessarily shape and define the parameters of copyright authorship. These concepts have been discussed in the

16. *See* Kenneth W. Simons, *Rethinking Mental States*, 72 B.U. L. REV. 463, 468–72 (1992).

17. *Cf.* Jane C. Ginsburg & Luke Ali Budiardjo, *Authors and Machines*, 34 BERKELEY TECH. L.J. 343, 353 (2019) (arguing that copyright authorship requires the combination of a mental state and a physical act).

18. Burrow-Giles Lithographic Co. v. Sarony, 111 U.S. 53, 58–60 (1884) (holding that copyright covers "all forms of writing, printing, engraving, etching, [etc.], by which the ideas in the mind of the author are given visible expression").

19. Simons, *supra* note 16, at 465 tbl.2 (delineating different types of "belief" and "desire" mental states).

20. *See* Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 346 (1991) (holding that copyright protection extends to "the fruits of intellectual labor" that are "founded in the creative powers of the mind").

context of copyright infringement, perhaps not surprisingly, as they are integral to legal liability and infringement is a form of commercial tort.[21] But as fundamental requirements of authorship, these concepts have received surprisingly little attention in the literature on copyright.[22] While one or two commentators have argued for more explicit recognition of concepts of intent[23] and causation[24] in copyright authorship, systematic examination of the circumstances giving rise to authorship reveals that these requirements are of necessity already present and operating in the law. AI-generated works may seem to be the product of copyright authorship simply because the elements of copyright authorship remain undertheorized.

In this Article, I attempt to draw together the disparate strands of scholarly commentary on causation, volition, and intent into a coherent exposition of copyright authorship. In doing so, I distinguish causation of *fixation* from causation of *expression*, and show their parallel to the requirements of conjoined act and mental state in other areas of law. I further explore the interlocking concepts of intervening causes, specific and general intent, and volition in the context of copyright. In some cases, these concepts allow us to find the author or authors among multiple causal candidates; in some cases, they lead us to a proximately remote author. In some cases, all candidates will be so proximately remote that we will conclude there is no author. In doing so, I hope to offer a framework that illuminates not only the particular question of authorship for AI-generated works, but undertheorized questions of copyright authorship generally.

The exposition of these concepts is styled as a series of authorial illustrations or Views involving hypothetical creative

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21. *See, e.g.*, Mala Chatterjee & Jeanne C. Fromer, *Minds, Machines, and the Law: The Case of Volition in Copyright Law*, 119 COLUM. L. REV. 1887, 1893, 1901–02 (2019); David Nimmer, *Volition in Violation of Copyright*, 43 COLUM. J.L. & ARTS 1 (2019); Robert C. Denicola, *Volition and Copyright Infringement*, 37 CARDOZO L. REV. 1259, 1272–73 (2016). Patent scholars have also only surprisingly recently begun the task of sorting out causation in patent infringement. *See, e.g.*, Amy L. Landers, *Proximate Cause and Patent Law*, 25 B.U. J. SCI. & TECH. L. 329, 390–91 (2019).

22. The most detailed treatment of the causation question to date is the surprisingly recent exposition by Professor Balganesh. *See* Balganesh, *supra* note 15, at 77 (arguing in favor of a coherent theory of authorial causation).

23. *See* David Nimmer, *Copyright in the Dead Sea Scrolls: Authorship and Originality*, 38 HOUS. L. REV. 1, 14–15 (2001); Christopher Buccafusco, *A Theory of Copyright Authorship*, 102 VA. L. REV. 1229, 1230–32 (2016) (arguing that intention is central to copyright authorship).

24. *See* Balganesh, *supra* note 15, at 77 (acknowledging that causation is an integral requirement to copyright authorship).

actions by the abstract expressionist painter Jackson Pollock, known for his "drip and splash" style of painting.[25] Pollock remains a figure of constant reconsideration in copyright commentary, not only because of his notoriety, but because his style continues to challenge both popular conceptions of expression in art and doctrinal strictures of expression in the law.[26] However, the experiences and attributes of the fictional Pollock portrayed in the following Views often depart from those of the historical Pollock. As the familiar boilerplate so often reminds us, any resemblance to actual persons, living or dead, is entirely coincidental.

II. THE 36 VIEWS

1. Jackson Pollock walks into his art studio, sets up a canvas, selects brushes and colors of paint, and then carefully daubs strokes of paint onto the canvas to produce patterns of color.

This first View offers a fairly standard, classic scenario for copyright authorship. Under the American copyright statute, authorship occurs upon the fixation of creative original expression in a tangible medium, such as the application of original paint patterns on canvas.[27] Originality in this sense does not connote (necessarily) expression that is unprecedented or objectively novel; it rather requires that the expression *originate* with the author, rather than being derived or copied from elsewhere.[28] This standard strongly implies, although it does not state, that the author must be the legally relevant causal mover behind the

25. MARY HOLLINGSWORTH, 1 ART IN WORLD HISTORY: FROM THE SIXTEENTH TO THE TWENTIETH CENTURY 471–72 (Gloria Fossi et al. eds., Routledge 2016) (2004).

26. *See, e.g.*, Grimmelmann, *supra* note 2, at 413 (offering Pollock's painting as an example of uncontrolled authorial creation); Alan R. Durham, *The Random Muse: Authorship and Indeterminacy*, 44 WM. & MARY L. REV. 569, 600–02 (2002) (discussing Pollock's style as an example of "indeterminate" copyright works); Justin Hughes, *The Personality Interest of Artists and Inventors in Intellectual Property*, 16 CARDOZO ARTS & ENT. L.J. 81, 163 (1998) (discussing Pollock's work in the context of copyright intentionality and unforeseen results). Pollock is also not coincidentally a favorite artistic icon of the Supreme Court. *See, e.g.*, Hurley v. Irish-Am. Gay, Lesbian & Bisexual Grp. of Bos., Inc., 515 U.S. 557, 569 (1995) (touting Pollock's abstract work as expression that is unquestionably shielded by the First Amendment).

27. 17 U.S.C. § 102(a).

28. Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., 499 U.S. 340, 345 (1991).

fixation.[29] The idea of "origination" implies that we must be able to trace the expression back to its origin.

Consequently, if Pollock is to be considered an author, we look for an unbroken chain of causation between his mental formulation of the work and the fixed image. In this View, that assessment seems fairly straightforward, but some caution is necessary. Pollock is the physical cause in fact of the paint on the canvas. But this causal identification tells us the origin of the act of fixation, not necessarily the origin of the fixed expression. In the language of copyright, this tells us the origin of the copy, but not necessarily the origin of the work.[30] We must be careful not to confuse the causal chain from mind to material copy with the causal chain of physical acts producing the material copy. While these must ultimately be coterminous, they may not converge until the last moment of completion.

If Pollock is a copyist, then the chain of causation extends farther back than his activity with the canvas, to whatever interaction supplied him with the expression that he is fixing, that is, to the interaction between Pollock and the antecedent origin of the expression. Naturally, no man is an island, and no author creates in a vacuum. Whatever an author is able to express is inevitably drawn from elsewhere: the childhood box of sixty-four colored crayons, the visit to the art museum when she was ten, a first glimpse of the ocean when she was twelve, and a lifetime of other experiences. But having been filtered through the mind and personality of a unique individual, the resulting expressive mélange of influences is considered under copyright law to be sufficiently attenuated from its sources so as not to constitute copying, either of other human expression or of naturally occurring and unoriginal "facts."

This is one rationale for the exclusion of expression of fact from the subject matter of copyright; that facts do not "originate" with a human author but are instead independently present in the world.[31] As I have pointed out elsewhere, this cannot be quite right, since facts can only be perceived due to human choices about

29. *See* Lawrence C. Becker, *Deserving to Own Intellectual Property*, 68 CHI.-KENT L. REV. 609, 614 (1993) (arguing that copyright authorship means the work "originates in the agent's labor—that its causal explanation is in some important sense traceable to the agent but not beyond").

30. 17 U.S.C. § 101 (defining "copies" and "phonorecords" as material objects).

31. *Feist*, 499 U.S. at 345; Harper & Row, Publishers, Inc. v. Nation Enters., 471 U.S. 539, 547–49 (1985).

what to measure and how to measure it.[32] A causation rationale may provide a better explanation: humans are a causal contributor to the development or instantiation of facts, but we do not attribute primary or proximate causality to human action. The primary causes for factual expression instead arise from the character of the material environment.

It is unfiltered or unaltered expression that might be considered to originate prior to its passage through Pollock's mind and hand, making Pollock's fixation in effect simply the transmission of expression drawn from elsewhere. If what Pollock transmits originates with another human, he may be an infringer of that antecedent author's copyrighted expression. Although my focus in this Article is not on copyright infringement, the relationship between authorship and infringement is important to note, and what we know about the fundamentals of infringement may sometimes be helpful in illuminating authorship. Infringement of another author's right of reproduction is, by definition, not authorship; rather than the fixation of original expression, it constitutes *unauthorized* fixation of expression that has been copied from elsewhere.[33]

2. Jackson Pollock walks into his art studio, sets up a canvas, selects brushes and colors of paint, and begins flinging paint at the canvas to produce random splatters of color.

The patterns that occur on the canvas once again originate with Pollock, although their exact shape and placement are subject to kinetic forces not precisely calculated, nor entirely within his control once they leave the brush or other implement within his grasp. The exact radius of gyration[34] and trajectory of paint droplets flung from his brush is neither known nor anticipated.[35] However, the bodily movements that propel the paint are controlled, and the unanticipated or indeterminate outcome is itself anticipated. Pollock's movements animating the movement of paint to canvas are both voluntary and intentional,

32. Dan L. Burk, *Method and Madness in Copyright Law*, 2007 UTAH L. REV. 587, 593–96 (2007).

33. *See* 17 U.S.C. § 501(a) (violation of the exclusive right to reproduce the work in material copies constitutes infringement).

34. *See* Apostolos E.A.S. Evangelopoulos et al., *Wetting Behavior of Polymer Droplets: Effects of Droplet Size and Chain Length*, 51 MACROMOLECULES 2805, 2809 (2018).

35. *See* Grimmelmann, *supra* note 2, at 413 (noting that Pollock did not control "the fluid dynamics of his paint splatters").

and indeed the random element affecting the outcome of the image is itself intended.

The role of intent in authorship has been contested among commentators, in part because there are different types of intent, and commentators are often addressing different forms of intent, even if the term employed seems the same. Professor Ginsburg has observed that copyright law does not take into account intentionality,[36] while Professor Nimmer has argued that copyright law necessarily must.[37] The conceptual gap between such observations parallels the distinctions between general and specific intent that are manifest elsewhere in the law, such as in criminal law or in tort.[38] Pollock may intend to create a painting without intending to create the particular painting that emerges.[39] Pollock may have a general sense of the image he wishes to produce, without intending *ex ante* certain features or nuances of the painting that emerges. Pollock may intend to put paint onto a canvas without intending that the paint occupy in the particular place or form the particular pattern that it does.[40]

Thus, just as criminal law has long distinguished between general and specific intent, copyright authorship surely must entail parallel distinctions.[41] The distinction between specific and general intent has become muddled in some areas, so it may be better to talk of "motive" as an ultimate intent, distinguishing that from specific objects of intent.[42] Pollock's motive may be to create a painting, without necessarily intending the exact result of each action he takes along the way. Pollock need not intend the specific result of his actions in order to fix original expression: he intended his bodily movements, he intended to fix expression, but he need not intend the resulting pattern that is fixed to qualify as an author.

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36. Jane C. Ginsburg, *The Concept of Authorship in Comparative Copyright Law*, 52 DEPAUL L. REV. 1063, 1085–88 (2003).

37. Nimmer, *supra* note 23, at 209–10; *see also* Jeffrey Malkan, *Rule-Based Expression in Copyright Law*, 57 BUFF. L. REV. 433, 500–01 (2009) (arguing that authorial agency requires intentionality); Hughes, *supra* note 26, at 148–49 (arguing that intentionality in copyright vindicates the author's personality interests).

38. *See* Eric A. Johnson, *Understanding General and Specific Intent: Eight Things I Know for Sure*, 13 OHIO ST. J. CRIM. L. 521, 521–22 (2016).

39. *Cf.* Buccafusco, *supra* note 23, at 1261–62 (arguing that copyright authorship hinges on general, categorical intent rather than specific semantic intent in creating).

40. *See* Durham, *supra* note 26, at 626.

41. *Cf.* Buccafusco, *supra* note 23, at 1261–62 (suggesting a distinction between general and specific intentions in copyright authorship).

42. *See* United States v. Bailey, 444 U.S. 394, 403–04 (1980) (discussing the definitional confusion around general and specific intent).

It is worth noting that the historical Jackson Pollock denied that his images resulted from accidents, asserting instead that he was in control of the paint and his placement of it.[43] Undoubtedly by this he meant that he had a general expectation as to the placement of color in the painting, as it is doubtful that he anticipated the exact dimensions of the form the liquid that he dripped, spattered, and poured onto canvas would take.[44] Indeed, much of the genius attributed to his artistic contributions lies in the spontaneity and inadvertent effects reflected in the results.

The historical Jackson Pollock's method also leads to the conclusion that expression originating with an author may be determined after fixation. Pollock intended to fix an image on canvas but did not know in advance the exact parameters of the pattern that would result from his actions. But clearly, he accepted the unanticipated paint patterns after the fact and would continue to add colors to a painting until he felt the image had reached a point that satisfied him as complete. The combination of fixation and selection or acceptance by the creator yields expression "originating" with that creator. Doctrinal support for this conclusion is suggested by famous language in the *Alfred Bell & Co. v. Catalda Fine Arts* decision, in which inadvertent additions to a mezzotint print were deemed original expression; the court suggested that the artist's acceptance of unintended results after the fact transformed mistakes into expression.[45]

At the same time, not every variation or quirk in fixation constitutes expression originating with an author, even if accepted by the person engaged in fixation. Decisions such as *L. Batlin & Son, Inc. v. Snyder* indicate that inadvertently fixed expression caused by the nature of the materials used or by the nature of their manipulation are not attributable to the author, and are not protectable by copyright.[46] In the *L. Batlin* case, the work at issue was a polymer plastic "Uncle Sam" novelty figurine based on a public domain cast metal coin bank.[47] The polymer copy differed in certain respects from the metal originals, and as in *Alfred Bell*, the differences were asserted as original expression.[48] But the

43. *Jackson Pollock*, *in* ABSTRACT EXPRESSIONISM: CREATORS AND CRITICS 137, 144 (Clifford Ross ed., 1990) (1950 interview with William Wright).

44. *Id.* ("I do have a general notion of what I'm about and what the results will be.").

45. Alfred Bell & Co. Ltd. v. Catalda Fine Arts, Inc., 191 F.2d 99, 104–05 (2d Cir. 1951) ("Having hit upon such a variation unintentionally, the 'author' may adopt it as his and copyright it.").

46. L. Batlin & Son, Inc. v. Snyder, 536 F.2d 486, 489 (2d Cir. 1976).

47. *Id.* at 488.

48. *Id.* at 489.

court found that the differences from the public domain bank on which the novelty was based were due to the physical characteristics and limitations of the polymer resin from which the copy was molded, not due to expressive choices made by the figurine's creators.[49] In effect, the court traced the chain of causation for the variations to the physical characteristics of polymer plastics, not to the mind of an author.

The assignment of proximately caused responsibility is a familiar if complex exercise from tort law.[50] As Professor Balganesh correctly suggests, assignment of proximate cause for copyright authorship will depend on a similar mix of pragmatic and policy considerations.[51] In some instances, a causal factor will be so dominantly positioned in space, time, or effect as to overshadow other contributing causes, and so will inevitably be imbued with legally relevant causation. In some cases, the general policy concerns of the copyright system, such as fostering creativity by rewarding authors, will dictate the assignment of legally relevant causation. In some cases, doctrinal concerns such as not undermining the copyright prohibition against copyright in natural occurrences or facts will dictate the assignment of proximate cause. As a quintessentially standards-based determination, the assignment of proximate causation will inevitably be a critical policy lever for effectuating purposive outcomes.[52]

3. Jackson Pollock exits his studio, leaving a window open. A wind blows through, knocking over a ladder on which cans of paint had been left sitting. The paint splatters on a nearby canvas, producing random patterns of color.

In this View, although Pollock's actions are clearly a factor in the outcome, the most immediate and dominant cause of the paint on canvas is an errant wind. In the language of causation, Pollock

49. *Id.* at 492.

50. RESTATEMENT (SECOND) OF TORTS § 9 (AM. L. INST. 1965) (defining the requirement of "legal cause").

51. *See* Balganesh, *supra* note 15, at 53–56.

52. *See* Dan L. Burk & Mark A. Lemley, *Policy Levers in Patent Law*, 89 VA. L. REV. 1575 (2003) (explaining the functions and uses of policy levers in the patent context). Discussion of policy levers in the copyright statute has been surprisingly sparse; for a notable foray in this direction, see Stacey L. Dogan & Joseph P. Liu, *Copyright Law and Subject Matter Specificity: The Case of Computer Software*, 61 N.Y.U. ANN. SURV. AM. L. 203 (2005).

created the conditions that resulted in the pattern of paint on the canvas but is not a cause of the pattern, certainly not a proximate or legally relevant cause. If we were assigning liability for damage to someone else's art materials, we might hold Pollock responsible for negligence in leaving the window open. But for purposes of copyright authorship, Pollock's actions do not convey an expressive conception into fixation; the physical outcome lacks an antecedent expressive mental state.

This construction of causation would preclude the image from being a work of authorship, let alone a work of Pollock's authorship. One way to reach this conclusion is to regard the result as simply lacking expression; natural occurrences such as gaseous pressure gradients do not express themselves, so that the pattern of paint resulting from an atmospheric disturbance is simply accident or happenstance. Alternatively, we could conceptualize the image on canvas as not having originated with Pollock: although he was a contributing cause of the outcome, having created the situation with paint and canvas and an open window, the causal chain does not lead back to the formulation of an expressed work in his mind.[53] The proximate causal factors were random natural events.

Therefore, we may conclude there is no expression proximately originating with Pollock assuming that the effects of the wind are accidental and unintended. We have drawn a parallel in the Introduction to tort law, and much of the assignment of tort liability depends upon the foreseeability of a harm caused by the tortfeasor.[54] Such foreseeability relates to the likelihood of a legally cognizable outcome.[55] We have already indicated that copyright does not require an author such as Pollock to foresee or anticipate those exact patterns of pigment that he fixes.[56] Instead, it seems clear that in the copyright context, for assigning authorship rather than liability, foreseeability is more useful in a negative sense. In this View, Pollock could not have foreseen that any painting would emerge from his accidental movements, let

53. *See* Balganesh, *supra* note 15, at 55–56 (arguing that creations of nature lack copyright authorship because they are not causally related to human action).

54. RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM § 3 (AM. L. INST. 2010).

55. *See* Benjamin C. Zipursky, *Foreseeability in Breach, Duty, and Proximate Cause*, 44 WAKE FOREST L. REV. 1247, 1267–68 (2009); W. Jonathan Cardi, *Reconstructing Foreseeability*, 46 B.C. L. REV. 921, 927, 930 (2005).

56. *See supra* notes 39–40 and accompanying text.

alone the particular painting that would emerge.[57] Consequently, the result does not fix his envisioned expression, but rather a random and unintended pattern of pigments.

4. Recognizing that it is a blustery day, Pollock intentionally leaves the window to his studio open before departing, expecting that an errant wind will likely knock over the paint cans that he has set up. As anticipated, the wind eventually topples the paint cans, splattering paint across a nearby canvas.

Unlike the previous View, Pollock's activities here are premeditated; even though he does not know in advance the exact timing or force of the wind, or the pattern that will emerge from its action, the fixation of the pattern by that means is part of his formulation of the final work. Pollock is employing the atmospheric gradient as an expressive tool, using a natural phenomenon instead of a paint brush to achieve some intended expressive effect. Artists frequently use natural forces such as weathering or oxidation to achieve the expressive effects they intend for their work.[58] Although the effects of the wind are unpredictable, so are the trajectories and placement of paint drops flung from a wildly wielded paint brush. Whether using a brush or a wind, Pollock's intent to fix expression changes the calculus of authorship, shifting the outcome from accidental to expressive.

5. Jackson Pollock walks into his art studio, sets up a canvas, then trips over the foot of a ladder, knocking over several paint cans and producing random splatters of color on the canvas.

Although Pollock is the actual cause of the patterns fixed on the canvas, the patterns were caused by undirected or accidental action, and so are unlikely to constitute expression because they were not generated from either specific or general intent. Pollock's actions were directed to a different purpose (moving around the studio space) and not to the fixation of expression. The splattered canvas is effectively the product of undirected natural forces, the

57. *Cf.* Shyamkrishna Balganesh, *Foreseeability and Copyright Incentives*, 122 HARV. L. REV. 1569, 1603, 1606–07 (2009) (arguing that unforeseeable infringement should lie outside of copyright's exclusive rights because it cannot have prompted creation under copyright incentives).

58. *See* McCutcheon, *supra* note 14, at 721–22 (offering multiple examples of artistic employment of natural effects).

result of an unforeseen occurrence in which Pollock, rather than the wind, happened to be the physical initiator.

We have already seen that authorship does not require that Pollock foresee in advance exactly the form that his expression will take; his pigments may take shapes or assume patterns that are the product of complex factors that, in one sense, are unforeseeable. But in applying paint to canvas, he takes actions toward a foreseeable general outcome. Similarly, in tort law, liability does not rest on foreseeability of the particular details or even the magnitude of the harm that occurs, but rather on foreseeability of the likelihood and general category of harm.[59] When Pollock takes affirmative steps toward fixation, the production of a painting, even one comprising unforeseen patterns, is the natural and probable consequence of his actions.

Couching Pollock's actions in terms of foreseeability criteria does not negate the authorship of the artistic "happy accident"—it is undoubtedly the case that in the process of fixing some works, unintended effects occur that the author may accept as part of the finished copy. This was the historical Pollock's entire method, and as indicated above, there is at least some authority suggesting that unintended expression originating from the process of fixation can constitute protectable copyright authorship.[60] However, the unintended additions to the lithographs in *Alfred Bell* occurred in the course of producing the prints—the act of producing the print was not accidental, only the particulars of the print were. Clearly the intent of the author in the case was to produce a print, and the execution of that intent incorporated incidental unintended expression. Tort and criminal law include concepts of "transferred intent," by which an actor is responsible for harm caused, even if the exact harm that occurred was not that which the actor initially intended.[61] Copyright might be thought of as including a similar concept of transferred fixation, by which an authorship may be conferred even if the expression fixed was not that originally intended.

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59. RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL HARM § 3 (AM. L. INST. 2010) (defining reasonable care in terms of the foreseeable likelihood and severity of harm).

60. *See supra* note 45 and accompanying text.

61. Wilfred J. Ritz, *Felony Murder, Transferred Intent, and the* Palsgraf *Doctrine in the Criminal Law*, 16 WASH. & LEE L. REV. 169, 171, 190 (1959). Like nearly all the tort and criminal law concepts raised in this Article, this is contested territory. *See, e.g.*, Peter B. Kutner, *The Prosser Myth of Transferred Intent*, 91 IND. L.J. 1105 (2016) (arguing that transferred intent was not and should not be a concept of tort law).

Some courts and commentators have couched such authorial authority in terms of "control."[62] Control may be a useful consideration, but only in a particular sense. For purposes of authorship, Pollock need not have precise control over the shape and distribution of paints that are launched toward the canvas.[63] He may intentionally cede control over fixation to an errant wind and remain an author. This suggests a bifurcation between control over fixation and control over expression. Pollock may delegate or relinquish some degree of control over the process and contours of the work's fixation—a degree of such chaos was indeed characteristic of the historical Pollock's work. But he is only an author if he retains decisional authority over the expression that is incorporated into the final product. So long as he retains "control" of the painting in the sense of exercising decisional authority over the project, we remain confident that he is the legally relevant, proximate cause of the expression that has been fixed.

Finally, intent may be important to serve as evidence of an authorial mental state, even if it does not constitute the authorial mental state. Unlike criminal statutes specifying intentional mental states for criminal liability, copyright does not require intent as a mental state for authorship to attach. But copyright *does* require as a mental state the formulation of original expression, and although not all intentional conduct is expressive, intent can be compelling evidence of expressivity.[64] Undirected or uncontrolled action is unlikely to be expressive; it is merely fortuitous. As a practical matter, if Pollock hangs the accidental picture in the gallery for sale, probably no one is likely to inquire into the method of its creation, whether he intended to create a painting, and whether he intended to create that particular painting. But in cases where evidence of intent is available, it serves as a powerful indicator of originality.

6. Jackson Pollock is tidying up his studio and suffers an unexpected seizure. His involuntary and uncontrolled motions topple paint cans onto canvas.

Although in this View the form of the paint on canvas is a physical result of his actions, Pollock's actions are neither

62. Balganesh, *supra* note 15, at 64; Durham, *supra* note 26, at 636–38.

63. Balganesh, *supra* note 15, at 66.

64. *See* Malkan, *supra* note 37, at 493.

voluntary nor intentional. He is the direct cause of the pigment on canvas, and the result that is fixed on canvas in that sense originates with him, but given the lack of volition and intent in fixing the pigments, what is fixed cannot be expressive. Consequently, his actions in this situation cannot be said to have caused fixation of original expression. Although Pollock is the direct and proximate cause of the pigments on canvas, he is not the proximate cause of any expression.

The role of involuntary, which is to say nonvolitional, muscle spasms or activity in meeting or negating the statutory requirements for a physical act is a perennial question in the assignment of liability in other areas of law. Loss of bodily control sometimes eliminates from the chain of causation a defendant's volitional action, as that term is understood in areas such as tort and criminal culpability.[65] In tort, for example, involuntary motions are not considered to constitute an "act" for which an "actor" might be held responsible.[66] Involuntary actions also give little evidence as to a defendant's state of mind, because the physiological link between mental state and outward expression of that state is broken. The defendant may not have the necessary mental state during a seizure, but in any case, proving the mental state becomes problematic.

Much the same may be said for copyright authorship; indeed, Professor Malkan makes volition the touchstone of his authorship analysis, arguing that authorship as a form of agency requires freely willed expression.[67] In this View, the fixed pigments cannot be linked back to Pollock's mental formulation of expression because of his intervening uncontrolled activity. Neither does it seem likely that in the course of his seizure Pollock was formulating artistic expression that he wishes to convey. As in a criminal or tort analysis, Pollock's involuntary actions, and even the cranial electrochemical activity that drives them, is considered to be separate from Pollock's personality or identity, and so not expressive of that identity. Of course, Pollock's pictures always originate in some type of electrochemical brain activity, but in the usual course of physiological action this will be coordinated with his intent and manifest actions.

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65. RESTATEMENT (SECOND) OF TORTS § 2 cmt. a (AM. L. INST. 1965). However, as Professor Denicola has noted, "volition" in the context of copyright infringement has taken on an idiosyncratic meaning quite different than its meaning in other areas of law. *See* Denicola, *supra* note 21, at 1262–63.

66. RESTATEMENT (SECOND) OF TORTS § 2 cmt. a (AM. L. INST. 1965).

67. *See* Malkan, *supra* note 37, at 435, 500.

7. Jackson Pollock begins to suffer from a mental illness. Due to his condition, he one day starts splashing paint on canvas, believing himself to be Rembrandt van Rijn painting "The Night Watch." The resulting painting bears no resemblance to "The Night Watch" in composition, color, or style.

In this particular View, there is a disconnection between intent and fixation, although the chain of causation remains intact. Pollock fully intends to produce a painting and directs his efforts toward that end—the painting that results is not the painting he intended to produce, but that is to some degree the case for all of Pollock's paintings: he generally intends to produce a painting but may not always intend every detail of what emerges. In flinging or spattering paint, even in a normal cognitive state, results and intent may be attenuated from one another. Here they are entirely separated; Pollock's actions are volitional and intentional, although his intent is disconnected from physical reality and from the results. As in the Fourth View, the author's intent need not be to produce the particular fixation that emerges; it must be a general intent to fix expression.

The conundrum of action driven by a mistaken or delusional perception is familiar from criminal law, where the disjunction between accepted reality and subjective belief may disrupt the connection between an act committed and the mental state required to commit a given crime.[68] But here the elements of criminal behavior or intentional tort and those analogous elements needed for copyright authorship, diverge somewhat from another. The "mental state" analog that we have identified as necessary for authorship in copyright is the formulation of an original expressive concept that is then fixed in a tangible medium. A mistaken belief or delusion concerning the circumstances of the expression's fixation does not eradicate the expression, neither does it necessarily disrupt the causal chain between the formulation of the expression and the act of its fixation.

A malady that negated the mental state necessary for copyright authorship would need to be a state that eliminated the formulation of expressive perception. Note that we must not mistake mental *conception* or perception of the creative work with *visualization* of the creative work; were Pollock born blind, he

68. Stephen J. Morse & Morris B. Hoffman, *The Uneasy Entente Between Legal Insanity and Mens Rea: Beyond* Clark v. Arizona, 97 J. CRIM. L. & CRIMINOLOGY 1071, 1087–88 (2007).

could still be the author of a fixed work of visual art. The formulation or conception necessary for copyright authorship is what Professor Ginsburg has called a "creative plan for the work."[69] This terminology is in itself a bit misleading, as we have said the creative execution may be spontaneous and so in one sense *un*planned, but what clearly seems meant is control, oversight, and responsibility for the process of fixation.[70]

We saw such a state, negating the creative mental state, in the previous Sixth View, but it is not clear that mental illness negates the formulation of creative expression. And while Pollock in this View is mistaken about the nature of the act he is engaged in, it nonetheless results in the fixation of expression that originated with him. He fully intends to fix expression, even if the nature of that expression and the act of fixation are incommensurate with his actual circumstances. His belief about the circumstances does not remove any element of authorship.

To the contrary, numerous famous creators have experienced mental illnesses—indeed, the historical Jackson Pollock may have suffered from a bipolar disorder.[71] The altered perception or delusional state of a creator may be considered part of their personality, and expression reflecting such perceptions will typically be original, authorial expression. Such mental states may in some cases have contributed the creator's unique perceptions and expression as reflected in their works. Although illnesses may entail mistaken or illusory beliefs about the surrounding world, to the extent that such perceptions become incorporated into copyrighted works, it seems clearly to be a part of the expression originating with that author.

8. After watching Captain Blood *before bedtime, Pollock dreams that he is Errol Flynn in the 1935 swashbuckler. Sleepwalking to his studio, Pollock seizes a paintbrush, and wielding it like a rapier he attacks (and no doubt defeats) a nearby canvas. When he awakens in the morning, he finds the canvas mysteriously covered with dabs, streaks, and splatters of red paint.*

This View again addresses a familiar conundrum from criminal law, where typically not only an act but an accompanying

69. *See* Ginsburg & Budiardjo, *supra* note 17, at 409.

70. *Id.* at 352, 354–55.

71. Albert Rothenberg, *Bipolar Illness, Creativity, and Treatment*, 72 PSYCHIATRIC Q. 131, 131–32, 141 (2001).

mental state is required to meet the strictures of a statute, and persons whose mental state is divorced from their actions by dream, hallucination, or even common mistake may lack the required mens rea.[72] In the previous View, Pollock is conscious but misapprehends the nature of his surroundings. Here, he is unconscious, acting out the narrative of an entirely internal mental state. Additionally, unlike the circumstances of the Seventh View, Pollock's beliefs regarding the context of his actions and the physical reality of his actions do not coincide; he does not believe in his dream that he is painting a picture but rather believes that he is engaged in a sword battle.

What emerges is an image that cannot be expressive; it is not intended to be, neither is it produced by actions that reflect its creators mental state. While Pollock is the cause in fact of the resulting painting, and his actions are certainly intentional, they are at the same time unconscious—he is unaware of his actual surroundings, and the motions he engages in are not what he believes them to be. Thus, Pollock's actions may not necessarily be considered "volitional": he is in physical control of his actions, but they are being directed by a mind detached from the surrounding environment in which his physical conduct is situated.

Neither is his subjective intent in this situation to fix any expression. The product of nonvolitional actions producing unintended consequences is effectively paint fixed to canvas by accident. The outcome is as much an accident of undirected action as is tripping over his painting ladder in the Fifth View. Either outcome may be regarded as an extreme version of the unconscious additions to the lithographic works in *Alfred Bell*, which were also unintended and accidental.[73] But here the *entire resulting work*, rather than a few details, is the consequence of unconscious or unintended fixation, so that the *Alfred Bell* argument can no longer hold.

9. An armed marauder breaks into Jackson Pollock's studio and threatens him with harm unless he produces a painting to the marauder's liking. Pollock paints the work under duress and

72. John Rumbold et al., *Criminal Law and Parasomnias: Some Legal Clarifications*, 12 J. CLINICAL SLEEP MED. 1197, 1197 (2016).

73. *See supra* note 45 and accompanying text.

hands it over to the marauder (who is subsequently captured, prosecuted, and jailed).

This View, posing another definitional scenario familiar from criminal jurisprudence, parses out the nature of the volition required for authorship. Pollock acts here under duress or coercion. Duress or coercion in the criminal context may at times be raised as a defense excusing criminal acts committed under threat, relieving the perpetrator of culpability because the activity was compelled.[74] The perpetrator under duress is in once sense unwilling, as the coercion restricts his choice. But coercion does not eliminate any element of the crime. In carrying out the criminal act, the coerced perpetrator has both the specific mental state and engages in the particular activity required to constitute a criminal violation. Compelled criminal acts are voluntary but excused.[75]

As in the criminal context, duress does not remove any element needed for authorship. A creator who fixes expression under duress has both the mental state and physical action needed for copyright. In this View, Pollock's actions are intentional and voluntary in the physiological sense—he has control of his tools and how they are directed. Pollock continues to have the latitude for freely willed expression, even if the circumstances of fixation are coercive. A rather different conclusion might result if the marauder dictated the particular characteristics of the painting under threat of force; in such circumstances Pollock becomes an unwilling extension of the marauder's will, executing his captor's expressive vision rather than his own.

Admittedly, Pollock's actions are also executed under the threat of harm, so might be said to be "involuntary" with regard to autonomous choice or free will, but this is not a question for authorship. Authorship depends on the specific intentional and volitional act of fixation, rather than broader concepts of volition. Creation of the work remains physiologically voluntary and intentional, even if the creator is unwilling or coerced. Pollock's specific intent in executing his brush strokes is to create a painting, even if his more general intent is to avoid threatened harm.

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74. *See* MODEL PENAL CODE § 2.09 (AM. L. INST. 1962).

75. *See* United States v. Bailey, 444 U.S. 394, 410, 411 n.8 (1980) (explaining duress as an excuse); Joshua Dressler, *Justifications and Excuses: A Brief Review of the Concepts and the Literature*, 33 WAYNE L. REV. 1155, 1170 (1987) (discussing duress as an excuse and the distinctions between excuses and justifications).

Neither does the threat constitute a causal origin of the work. Although a threat from the marauder motivates the fixation of the work, we would not vest the marauder with authorship; he is not the legally relevant origin of the fixed expression. The threat of violence is in some sense an originating causal factor in the creation of the work; the painting would not be created without the menace that motivated the painter to paint. But copyright authorship is generally not concerned with the particular motivation underlying creation—the author may fix original expression when inspired by creative curiosity, or driven by hatred, or compelled by the demands of creditors. The work may be intended to defame or otherwise cause harm, but copyright still attaches. Intentionality in copyright looks to the immediate act of fixation, not to the ultimate social value or purity of the author's motivations.

10. Jackson Pollock lays canvases out on the floor of his studio and produces paintings by dripping and pouring various colors of paint across the horizontal canvas. In the process, a good deal of paint is dripped onto the floor, building up patterns of color over the years. Pollock eventually sells the property and moves away. After the property is sold, the new owner, noticing the spatters of paint across the studio floor, removes a section of the floor and displays it as a "Jackson Pollock original."

The "drip and pour" method of painting canvases on the floor was in fact the signature process of the historical Jackson Pollock.[76] In historical happenstance, as in this View, spilled paint was an inevitable incidental outcome of the painter's creative work, resulting in the fixation of paint on the floor around his expressive work. To the casual observer, the patterns in each case might appear similar or even indistinguishable. The difference between the incidental paint and Pollock's art would be that he considered one to be his expression and the other not. For copyright purposes, the fixation of each type of pattern has its causal origins in Pollock's physical activity, but one fixed original expression of an author, and the other was no more expressive than the patterns produced in the Third View from tripping over the ladder. The assertion by the new owner of the studio of expressivity in the incidentally spilled paint is a complete

76. THE BEGINNER'S GUIDE TO ART 257 (Brigitte Govignon ed., John Goodman trans., 1998).

disconnection between the acts fixing the paint on the floor and any intent that such acts should constitute original expression.[77] Pollock at no time considered the spilled paint expressive; he likely considered it incidental to his actual work of expression and perhaps a bit of a nuisance. The spilled paint fixes no expression or mental state intended by Pollock. It owes its form and fixation to Pollock's acts, but these were not acts of fixation; like tripping over the ladder in View Three, they were simply accidents.

This View also underscores that the act of adoption after the fact, per *Alfred Bell*, cannot stand on its own in isolation; it requires a causal linkage to the act of fixation. The new owner of Pollock's studio adopts the spilled paint as expressive, but it is a vicarious adoption—he wishes to assert the expression as Pollock's. There is no reason to think that another's adoption of an artistic accident can imbue an item with unintended expressivity. Indeed, Pollock may likely object to the representation of the flooring as his work, although how he might assert such an objection is itself problematic. Pollock might have some type of trademark "passing off" or right of publicity claim against the attributing of the flooring to him, but it is not clear under American law that artists have a right to disclaim or repudiate their work.[78] Ironically, if Pollock wishes to prevent the unauthorized sale or distribution of the flooring, his best legal maneuver might be to assert copyright in the flooring so as to secure exclusive rights against its distribution, placing him in the odd position of asserting copyright authorship in order to repudiate artistic authenticity.[79]

Neither can the act of adoption or recognition make the new owner the author of the paint patterns. Probably the new owner does not want to adopt the flooring patterns as his own expression, as this would make them far less valuable. The new owner of Pollock's studio would not become an author by adopting as "expressive" a curiously shaped stone found at the beach. Nor can

77. *Cf.* Durham, *supra* note 26, at 624–26 (posing a similar hypothetical regarding a section of flooring from a hardware store).

78. *See, e.g.*, Marc Jancou Fine Art Ltd. v. Sotheby's, Inc., No. 650316/2012, 2012 WL 7964120 (N.Y. Sup. Ct. Nov. 13, 2012), *aff'd*, 967 N.Y.S.2d 649 (App. Div. 2013) (mooting an artist's attempt to disavow or repudiate the authenticity of their work under the Visual Artist's Rights Act due to a preexisting consignment agreement with auctioneer).

79. Although, it is possible that, with the sale of the studio to its new owner, any exclusive right Pollock might have asserted against distributing the flooring might have been exhausted. *See* Kirtsaeng v. John Wiley & Sons, Inc., 568 U.S. 519, 525, 530 (2013) (affirming copyright "first sale" doctrine of exhaustion after an authorized sale regardless of geographical considerations).

he become an author by adopting as "expressive" the spilled paint found on the floor of his purchased studio. In neither case was he responsible for fixing the form of the item adopted; in neither case did he plan or conceive or intend the form that the adopted artifact took. Labeling the object as expressive occurred entirely after fixation and there is neither a causal linkage between his act and the form of the object nor between his mental imagination and the form of the expression. If anything, causation runs the other way; the form of the object prompted his adoption and labeling of the object as expressive.

Thus, this View also bears on the concept of "found art," such as the "readymade" art objects selected and asserted as artistic works by Duchamp. Duchamp appropriated existing objects, such as restroom fixtures, and declared them to be art by virtue of adopting and labeling them.[80] This was perhaps original art, but not original expression. Setting aside the subject matter problem that such objects were generally utilitarian artifacts whose shape was dictated by functions ineligible for copyright, for purposes of copyright authorship, whatever expression may have been vindicated by Duchamp's adoption and display of the objects was not fixed by him in the unaltered found objects.

11. Jackson Pollock cuts grooves into a copper plate or linoleum sections. He inks them and uses a mechanism to press them onto paper, producing designs on the paper, which he signs and numbers. These are sold as "Jackson Pollock originals."

In this View, rather than single unique fixations, Pollock is producing multiple fixed and determined images using a mechanical press device. The marketing of the resulting prints highlights differing uses of the term "original," which in everyday parlance and in the language of art does not connote the origination of the fixed expression, but rather the degree of personal handling and involvement by the artist. This is to some extent related to the idea of "authenticity" and is typically certified by the signature and/or numbering by the artist. This is standard practice and the common understanding of authorship in lithography, where the creative work is initially fixed in the medium of the plate, which is a tool or conveyance of the image to

80. *See* DALIA JUDOVITZ, UNPACKING DUCHAMP: ART IN TRANSIT 124–35 (1998).

a substrate such as paper—just as the paintbrush held by the artist would be.[81]

Although the personalized images are termed originals, in copyright parlance these prints are "copies," meaning material objects in which the conceptual expressive work has been fixed—this would be true even if the work is fixed only in a single copy, such as Pollock's paintings.[82] Indeed, in copyright the incised plate itself is deemed a "copy" of the expressive work—the first copy fixed in a tangible medium. The inked paper drawn from the press is an authorized copy of the expression etched into the plate (or perhaps it is an authorized derivative work, because it will be the reverse of the image embedded in the plate). The expression fixed in the prints can be traced from Pollock's hand to the incised and inked plate to the paper to which the ink is transferred. As the *Alfred Bell* case teaches, lithography can incorporate random or unexpected features, but the range of indeterminacy is narrower than for the paint spewing machine.[83] In either case, the range of indeterminacy is one of the creative choices specified by the author of the expression that the machine fixes.

12. Jackson Pollock designs and builds a machine that sucks up quantities of paint and carefully daubs them onto a canvas, following a pattern Pollock has built into the machine's gears. Pollock enters his studio, sets up a canvas, and activates the machine, producing a painting.

Artists routinely fix expression by means of tools: the pen, the paintbrush, the chisel, the loom, and the simple type of printing press from the previous View. The machine employed in this View is in effect another tool for implementing the artist's vision, joining the paintbrush and the paint knife as a means of manipulating pigment onto canvas. Pollock's manipulation of this tool is not as obvious as that of the brush grasped in his hand—the machine appears to act autonomously in applying paint to the canvas, without Pollock's immediate direction. But the machine's actions mask a wealth of prior human preparation: design, assembly, and tooling in addition to the final activation of the machine by the artist's hands. These activities causally link Pollock's expression

81. *See* ANTONY GRIFFITHS, PRINTS AND PRINTMAKING: AN INTRODUCTION TO THE HISTORY AND TECHNIQUES 9–11, 101 (1st ed. 1980).

82. *See* 17 U.S.C. § 101 (defining "copies").

83. *See supra* note 45 and accompanying text.

to the machine, and ultimately to the canvas over time. Pollock need not directly and personally place paint on the canvas in order to be the relevant cause and author of the painting. The fact that the actual mechanics of the painting process are physically executed by a machine does not negate the direct causal link between artist and the fixation of the work of authorship.

The question of authorship by means of a mechanical device was similarly implicated in early decisions involving photographic equipment; the argument surrounding the new imaging technology was whether the photographer, adjusting and manipulating the device, was in fact engaged in creative activity that could constitute authorship.[84] Certainly machines such as printing presses had been used as the means of creative production, but these always involved some clearly copyrightable work, such as a text or graphic. Photography seemed to be the result of purely functional mechanical adjustments. Nonetheless the Supreme Court held in *Burrows-Giles Lithographic Co. v. Sarony* that the photographer's activity in arranging and defining the subject entailed creative choices, placing the resulting photograph—the output of the machine—within the ambit of copyright.[85] Over time, this holding has come to encompass choices in the operational parameters of the photographic device as well, implying that mechanical or operational choices can be the basis for copyrightable originality.[86]

Pollock's preparation of the device determines how his expressive choices will be transmitted to canvas via the mechanism upon activation. The determined output of expression by means of mechanical gear configuration, well known in music boxes, amusement park automata, and other mechanically animated devices, is effectively a form of programming in which the routine is permanently incised into the structure of the machine. Gear configuration was also the basis for the workable designs of Charles Babbage's pioneering Analytical Engine, a type of mechanical Victorian computer.[87] Not coincidentally, gear configuration was the analogy famously used by Commissioner

84. *See* Justin Hughes, *The Photographer's Copyright—Photograph as Art, Photograph as Database*, 25 HARV. J.L. & TECH. 339, 343 (2012); Christine Haight Farley, *The Lingering Effects of Copyright's Response to the Invention of Photography*, 65 U. PITT. L. REV. 385, 419 (2004).

85. Burrows-Giles Lithographic Co. v. Sarony, 111 U.S. 53, 60–61 (1884).

86. *See* Farley, *supra* note 84, at 445–46.

87. *See* DORON SWADE, THE DIFFERENCE ENGINE: CHARLES BABBAGE AND THE QUEST TO BUILD THE FIRST COMPUTER 1–6 (Viking Penguin 2001) (2000).

Hersey in the 1978 report of the Commission on New Technological Uses of Copyrighted Works to show the equivalence between computer software and other functional devices.[88]

13. Jackson Pollock designs and builds a machine that sucks up quantities of paint and precisely daubs them onto a canvas, following a pattern of holes that Pollock punches into cards that trip the machine's gears. Pollock enters his studio, sets up a canvas, and activates the machine, producing a painting.

In this View, the painting machine's output remains determinate but is not static. The machine depicted in the Twelfth View produces an output determined by its mechanical structure; there is a single output associated with that structure. In this View, rather than fixing a single determined output dictated by mechanical structure, the device is differentially programmable, so that the output may be altered by replacing a piece of the machine, that is, the set of coded instructions. Rather than building a new machine dedicated to each desired painting, the single machine's determined output can be altered, so that different images will be produced depending on the instructions coded into the cards.

Pollock could of course follow a determinate pattern by daubing paint himself but has instead delegated the task to a device that follows instructions coded into cards. This is the same approach as taken in the Twelfth View with the mechanically tooled gear-driven machine; the advantage in this instance being that it is simply easier to change the cards inserted into the machine than it is to retool the gears of the machine—or replace the hardwiring of an electrical computer, or the circuitry of an electronic computer. Pollock is painting by means of an elaborate tool, but this once again is not in principle different than the use of a paintbrush, air brush, or any other artistic tool by which the creator effectuates fixation of expression.

The use of punch cards for storing data and mechanical routines is of course a form of software programming, tracing back to the early nineteenth-century Jacquard loom (which strongly influenced Babbage) and Herman Hollerith's late nineteenth-

88. NAT'L COMM'N ON NEW TECH. USES OF COPYRIGHTED WORKS, *supra* note 7, at 29–30 (dissenting opinion of Commissioner John Hersey).

century census tabulating devices.[89] A long line of court decisions have held—probably wrongly—that the encoded instructions for generating the artistic work are equivalent to the work itself.[90] Under these decisions, it might be said that the fixation of Pollock's expression is actually in the sequence of holes in the punch cards, or in the case of the Twelfth View, in the equivalent design of the gears. But in any event, whether or not the punched holes in Pollock's cards are a fixation of his painting, there should be little dispute that the pigment on canvas painting as implemented by Pollock's machine originates with Pollock, so that there is a direct line of causation from Pollock to his punch cards, through the machine's directed actions, to the pattern fixed on the canvas.

14. Jackson Pollock sets up and activates his painting machine, but the machine malfunctions (possibly due to a jammed punch card) and begins splattering the canvas with colors that Pollock did not intend to place in areas where he did not intend to place them.

Although Pollock is a substantial antecedent cause contributing the painting that is produced in this View, the fixed work cannot be said to constitute expression that he envisioned or intended. Like the accidental paint splatters in the Third or Fifth Views, the image produced here is the result of a random and unforeseen occurrence. To be sure, we have determined that all of Pollock's hand-painted images are to some degree the result of random or unforeseen occurrences that he harnesses in the transfer of paint to canvas. But such occurrences, while unpredictable, are intended in the course of Pollock spattering paint on canvases. His usual methods anticipate a degree of variation or fortuity in the process of fixing expression.

Here, by contrast, an intervening cause—the malfunction—disrupts the causal chain between Pollock and the painting

89. *See* Michael N. Geselowitz, *The Jacquard Loom: A Driver of the Industrial Revolution*, IEEE SPECTRUM (Jan. 1, 2019, 19:44 GMT), https://spectrum.ieee.org/the-institute/ieee-history/the-jacquard-loom-a-driver-of-theindustrial-revolution [https://perma.cc/5MTR-4QLK]. The same technology is of course the source of the famous "hanging chads" of punch card voting devices. *See* RICHARD L. HASEN, THE VOTING WARS: FROM FLORIDA 2000 TO THE NEXT ELECTION MELTDOWN 12–13 (2012).

90. *See, e.g.*, Stern Elecs., Inc. v. Kaufman, 669 F.2d 852, 855 (2d Cir. 1982); Williams Elecs., Inc. v. Artic Int'l, Inc., 685 F.2d 870, 877 (3d Cir. 1982); *see also* Dan L. Burk, *The Mereology of Digital Copyright*, 18 FORDHAM INTELL. PROP. MEDIA & ENT. L.J. 711, 724–25 (2008) (critiquing the logic of the holdings in *Stern* and *Williams*).

produced and was not foreseen or expected. Such superseding or intervening causes are considered in tort doctrine to break the chain of causation that would lead to a legally foreseeable outcome.[91] Similarly, this outcome departs from Pollock's intent in setting up that machine and its environs. And although the *Alfred Bell* case indicates that a degree of unintended variation may count as original expression,[92] the departure from Pollock's expectations in this case is orders of magnitude larger—effectively the entire image is an unintended outcome. The entire painting, rather than certain details, came about as the result of an accident, just as in the case of paintings produced by wind or by Pollock stumbling in the studio.

15. Jackson Pollock sets up his painting machine, and then leaves, having given his assistant a carefully sorted stack of punch cards to feed into the machine when activated. The assistant drops the cards, scattering them. After gathering the cards back up, the assistant shrugs, activates the machine, and feeds the disordered cards into the machine. The machine produces a painting from the randomized instructions on the reordered cards.

In this View, another intervening cause disrupts the chain of causation between the formulation of Pollock's expression and the fixation of that expression. Here the intervention is human error rather than mechanical malfunction. The painting that results from the disordered card programming might be said to result from an accident, not unlike Pollock tripping over a ladder, or the machine malfunctioning in the previous View. Of course, the machine's physical mechanism is operating perfectly, functioning according to the instructions given to it—it is the instructional programming that departs from Pollock's intent, directing the machine to fix something other than the expression Pollock intended to transmit.

However, there is an alternate view under which, rather than taking the finished painting as a whole, we consider Pollock's painting to constitute an assemblage of colors and patterns—a compilation of its constituent elements.[93] Compilations are eligible for copyright, even if their elements are unoriginal, so long as the

91. Richard W. Wright, *The Grounds and Extent of Legal Responsibility*, 40 SAN DIEGO L. REV. 1425, 1468 (2003).

92. *See supra* note 45 and accompanying text.

93. *See* Burk, *supra* note 90, at 738.

selection and arrangement of the elements are original.[94] From a reductionist perspective, Pollock's intended design might be said to consist of certain patterns of paint, coded into cards, which are arranged in a particular sequence. Although the intervening accident forestalls the fixation of Pollock's arrangement of pigments on the canvas, his *selection* of paint patterns may be said to remain. That is to say, the steps that Pollock intended to be executed are still executed, but in a different order.

Whether this results in the fixation of Pollock's expression will depend on whether his original selection of patterns survives the scrambling of the machine's instructions to constitute discrete elements fixed in the final painting. Methods and processes are specifically excluded from copyright,[95] so there cannot be an authorship claim to the Pollock's selection of mechanical painting steps per se—only to his selection of patterns fixed by those steps. If Pollock's selection of patterns is not obliterated by their random arrangement, those elements may be causally traced back to Pollock's imagination, fixed at his instigation. The selection of paint patterns in the resulting canvas might be said to originate with Pollock, even if the arrangement originated from an intervening accident.

16. Jackson Pollock designs and builds a machine that sucks up quantities of paint and spews them on a target canvas, producing random rather than premeditated splatters of color. Pollock enters his studio, sets up a canvas, and activates the machine, producing a painting.

The device used in this View differs in its unpredictability from those in the previous views—unlike the paint spewing machine in this View, the output of the simple lithograph press, the gear driven machine, or the card directed machine, are all determined and predictable. Indeed, the gear-driven machine in the Twelfth View is in some sense the equivalent of the copperplate printing device from the Eleventh; the artist's expression is incised into gears that that can be used to produce further images rather than incised as an image on a plate. It is

94. 17 U.S.C. § 103.

95. 17 U.S.C. § 102(b); *see also* Pamela Samuelson, *Why Copyright Law Excludes Systems and Processes from the Scope of Its Protection*, 85 TEX. L. REV. 1921 (2007) (discussing the development of and caselaw related to the exclusions under § 102(b), including systems, methods, and processes).

also conceivable that the programmed painting machine from the Thirteenth View, deterministically executing Pollock's punch-card instructions, is the equivalent of the copperplate etchings or gear trains. Courts have repeatedly held that digitally encoded versions of original works are the equivalent of the work expressed as the output of the code.[96]

Here Pollock again employs an extended instrumentality to fix expression, but one that introduced a degree of indeterminacy into the fixation process. Unlike the machine in the Thirteenth View, the design of this machine cannot be said to hold the encoded patterns of the painting it produces; it does not encompass a coded copy of the output. The painted image produced is indeterminate in the sense that it is not wholly determined by the characteristics of the machine that generates it; various other random or incalculable factors related to the trajectory of paint droplets and their radius of gyration affect the contours of the pigment that is fixed on canvas.

But this unpredictability is true whether the paint flies from a brush held by Pollock or from a machine built by Pollock. The fixation that occurs via this machine is intentionally random; perhaps the nozzles are mechanically oriented according to the chaotic motions of an unstable system of weights; perhaps they are electronically oriented according to the feed of some unpredictable data stream such as cosmic background radiation or a stock market index. Whatever the origin of its randomness, the unpredictability of the action of the machine does not make it the origin of the image any more than the motion of Pollock's paintbrush would. Pollock is the actual and proximate cause of the resulting painting; he designed the machine, initiated its operation, and arranged the setting in which it produces its output.

Thus, Pollock's intent in this case is again effectuated through mechanical design, even if the outputs are unpredictable. This machine is not programmed for precise, determined fixation as is the machine in Views Eleven through Fourteen; it is rather programmed for imprecision or indeterminacy in the placement of the paint. But Pollock's intent is to incorporate random and spontaneous elements into his painting, just as was the case when his tool was a paintbrush. Although he has not and cannot envision the exact pattern that is ultimately fixed in the painting, the indeterminacy of the outcome is itself part of his expression

96. *See* cases cited *supra* note 90 and accompanying text.

either by means of a handheld brush or by means of mechanical paint spattering device. Just as when Pollock flings paint by hand, his general intent remains to fix an image on canvas, even if he did not specifically intend all the exact shapes and patterns of pigment that result. The resulting painting is a work of authorship conforming to his general design.

17. Jackson Pollock is away on vacation and instructs his assistant in detail how to enter his studio, what paints to select and where to set up canvases, and then to activate the random paint spewing machine. The assistant does so, resulting in a painting.

In this View we begin to consider whether the intervention of another person in the chain of causation, between the creator and the fixed work, changes the indicia of authorship. We have seen a previous human intrusion in the Ninth View, but the intervention in that case was not causally positioned between Pollock and his canvas; the marauder's actions in the Ninth View were causally antecedent to Pollock's fixation of expression. Here by contrast the assistant executes Pollock's instructions regarding fixation, using Pollock's tools, and comes between Pollock and the act of fixation so to speak.

The insertion of another actor between the creator and the fixed work leads us to ask whether the assistant's intervention obstructs or interferes with Pollock's authorship, and whether the assistant's activity might make the assistant an author himself. The answer to each of these queries in this View appears to be no. As a formal matter, the copyright statute contemplates fixation as occurring either by an act of the author, or under the author's authority.[97] The assistant's actions are the immediate cause of the machine's activation and the fixation of paint on canvas. The assistant's actions are voluntary and volitional, in the sense that they are under his own physical and mental control. But the assistant's actions are also voluntarily directed by Pollock—presumably the assistant is motivated by the promise of salary or other reward, rather than motivated by threat as in the Ninth View. We have of course already established in the Ninth View that motivation is not at issue for authorship, but the relevance here is that the assistant becomes a willing extension of Pollock's expressive intent, something quite different than Pollock

97. 17 U.S.C. § 101 (defining "fixed").

becoming an unwilling but intentional extension of the marauder's general instructions.

In this sense the assistant becomes in essence a tool or implement for Pollock's intent, not unlike the machines in the previous Views. We noted that the machines deployed in the previous Views could give the illusion of independent creation once they are in operation, because unlike Pollock's paintbrush, there is no human hand immediately and obviously directing their action. But as we observed in the previous commentary, Pollock's direction and control over the process was temporally displaced; the design, setup, and programming occurred prior to the machines' execution of their instructions. Similarly, Pollock is not immediately present directing the assistant's actions, but as in the case of the machines, his direction is temporally displaced, having occurred before the assistant sets up the painting rig. As we have also noted, some cases treat instructions as equivalent to the work,[98] in which case Pollock might simply be regarded as conveying the work to the canvas by means of the obedient assistant.

Imputing the legal consequences of an agent's activity to another is again a familiar concept from other areas of law. Agency relationships or master-servant doctrines create vicarious attribution of liability in tort or criminal jurisprudence.[99] The agent essentially becomes a tool or extension of the principal's intent, disappearing from legal contemplation as the cause of the harm, which is instead imputed to the principal who directs and initiates the agent's actions. A statutory version of imputed action appears in copyright's "work made for hire" provisions.[100] But regardless of whether the assistant's situation comports with the statutory provisions, fixation of Pollock's expression by the assistant's hand is imputed to Pollock.

Some courts and commentators have couched such authorial authority in terms of "control."[101] Control may be a useful consideration, but only in a particular sense. For purposes of authorship, Pollock need not have precise control over the shape and distribution of paints that are launched toward the canvas. He

98. *See* cases cited *supra* note 90 and accompanying text.

99. MODEL PENAL CODE § 2.06 (AM. L. INST. 1985); RESTATEMENT (THIRD) OF AGENCY § 2.04 (AM. L. INST. 2006); *see also* Ralph L. Brill, *The Liability of an Employer for the Wilful Torts of His Servants*, 45 CHI.-KENT L. REV. 1, 4–14 (1968).

100. 17 U.S.C. § 101 (defining "work made for hire").

101. Cmty. for Creative Non-Violence v. Reid, 490 U.S. 730, 751–52 (1989); Balganesh, *supra* note 15, at 64–66; Durham, *supra* note 26, at 636–38.

may intentionally cede control over fixation to an errant wind or an unpredictable machine and remain an author. Certainly, he remains an author if he cedes physical control of the fixation process to a compliant assistant. This suggests a bifurcation between control over fixation and control over expression. Pollock may delegate or relinquish some degree of control over the process and contours of the work's fixation—a degree of such chaos was indeed characteristic of the historical Pollock's work. But he is only an author if he retains decisional authority over the expression that is incorporated into the final product. So long as he retains "control" of the painting in the sense of exercising decisional authority over the project we remain confident that he is the legally relevant, proximate cause of the expression that has been fixed.

Of course, we anticipate that the assistant, being a human, is capable of independent action, unlike the machines. As an antecedent cause in the creation of the painting, the assistant might in some sense be considered a collaborator in the fixation of the work. As a participating, potentially independent and volitional human cause of the resulting painting, we might query whether this qualifies the assistant for authorship, or more likely for co-authorship. But this is not the case if the assistant's acts only effectuate Pollock's expressive intent in building, arranging, and activating the machine. Having contributed no appreciable expressive content to the painting, he cannot be an author or a joint author for copyright purposes. In order to become a joint author a contributor must tender expression that is separately copyrightable, and which is intended by both authors to become a unified and integrated part of the final work.[102]

18. Pollock sets up his paint spewing machine in his studio and connects it to a timer that is set to activate while he is away. When the timer goes off, the machine executes its program and produces a painted canvas.

In several of the previous Views, Pollock was temporally separated from the fixation of his expression on canvas by virtue of having previously specified or fixed the work in the mechanics of a device. In this View, Pollock is separated from the production of a previously unfixed painting in time, but he still remains the direct and proximate cause of its fixation—there is merely a delay

102. 17 U.S.C. § 101 (defining "joint work").

between his initiation of the process of fixation and the machine's response. There will of course always be a delay between pressing the button to activate the machine and its response—usually a matter of seconds, or microseconds. Presumably, there is also some delay between the firing of Pollock's synapses and the neurophysical response of his hand in placing the pigment when he is painting an image directly. Here the delay between the formulation of his intended expression and the initiation of fixation is pronounced, but Pollock's intent and initiation of action are no different.

At some point, after a period of weeks or years, the delay between setup and initiation of the painting might become so pronounced that we could no longer draw the inference that the result was what Pollock envisioned and intended to fix—the colors of the paint might have oxidized or faded, or the machine's action might be impaired by corrosion. Then again, as we noted in the Fourth View, in some cases the action of decay and entropy is exactly what the artist intended. The magnitude of the delay merely alters the inferences we might draw as to his intent but does not itself curtail or eliminate any of the elements of authorship.

This View also indicates the result if Pollock is removed in space rather than in time, activating the machine remotely via a timer or via a contemporaneous signal. Despite his lack of physical proximity, Pollock remains the direct and actual cause of the machine's operation, and of the painting that results from the machine's operation. The machine remains his artistic implement, although it is devised to function under his direction from a greater distance than would his paintbrush. The machine with a remote activation device is simply an extended instrumentality for effectuating Pollock's intent to fix pigment on canvas. The outcome is the same whether Pollock physically wields a paintbrush with a very long handle or activates a painting tool from across the globe.

19. Jackson Pollock begins to set up his random paint spewing machine, is interrupted, and has to leave. The machine short-circuits and begins spewing paint around the studio. It happens to hit a canvas with a good deal of paint in the course of its operation.

As in the Third View, the image that is fixed in this View occurs as the result of an accident rather than any intentional fixation of formulated expression. But here Pollock's actions are not the direct cause of the image that is fixed; although Pollock

initiates the process, he never gets beyond preparatory acts. Rather, the malfunction of his intermediary device is interposed between his activity and the result. And unlike the instructional malfunction in the Fifteenth View, in this instance Pollock has only set the stage for what occurs but has not initiated any mechanical action. Although Pollock intended to fix a work in a tangible medium, and perhaps had mentally formulated the expression to be fixed, something else entirely was fixed by the machine without Pollock's immediate initiation. Rather, an unexpected (and probably unwelcome) intervening cause breaks the chain of causation between Pollock and the painting. And, as in the Third View, the unforeseeability of the accidental painting produced by the mishap militates against construing the outcome as Pollock's original expression.[103]

The disruption of a chain of causation by an intervening cause is a common issue in the assignment of legal liability in tort or criminal law. Where the effects of the intervening cause supersede those of the human actor, the perpetrator may be relieved of responsibility, no longer being the most significant and proximate cause of the result. Absolution from liability typically depends on the foreseeability of the intervening cause in relation to the likely outcome of the perpetrator's act.[104] Where the intervening cause is one that should have been expected, or the outcome remains the foreseeable outcome from the breach, liability still attaches.

Tort law traditionally distinguishes between dependent intervening causes, which are initiated by the actions of the tortfeasor, and independent intervening causes, which intervene from outside the causal chain initiated by the tortfeasor.[105] *Alfred Bell* suggests that at least some dependent intervening causes may constitute original expression; certainly the unintended actions or circumstances resulting, in that case, in incidental fixation might originate with the creator of the work.[106] However, a question may remain as to whether the results are expressive under *L. Batlin & Son*.[107] Alternatively, *L. Batlin & Son* might be read to stand for the proposition that an independent intervening cause cannot be

103. *See supra* notes 53–57 and accompanying text.

104. *See* STUART M. SPEISER ET AL., 3 AMERICAN LAW OF TORTS § 11:9 (2020), Westlaw (database updated Mar. 2020).

105. *See* Eric A. Johnson, *Two Kinds of Coincidence: Why Courts Distinguish Dependent from Independent Intervening Causes*, 25 GEO. MASON L. REV. 77, 83–84, 83 n.44 (2017).

106. *See supra* note 45 and accompanying text.

107. *See supra* note 46 and accompanying text.

considered to originate with the creator of the work, because the result of an intervening cause originates with that cause, whether or not we consider the result to constitute expression.

20. Jackson Pollock is away on vacation, but leaves his assistant with detailed instructions, down to the brush stroke, as to how to produce a particular painting by hand. Following the instructions, the assistant produces a painting.

In this View, a human actor again enters the picture, but unlike the Seventeenth View, the human assistant is directly executing Pollock's instructions on fixation without a mechanical intermediary. We can again treat this as a temporal delay in fixation that Pollock has initiated. As in the Eighteenth View, Pollock is not physically present as the painting is created. However, unlike the Eighteenth View, Pollock does not execute any actions that directly result in fixation. Despite not being physically present at the time and place of fixation, or immediately remotely initiating fixation, Pollock remains the relevant legal cause of the resulting painting. Rather than conveying expression to the canvas by means of a machine, Pollock does so by means of communication with his assistant.

As in the Seventeenth View, the assistant is of course the cause in fact of the resulting painting, having literally, physically painted the picture, but his actions here fix determined expression conveyed to him by Pollock. With the removal of the machine that in the Seventeenth View stood between the assistant's actions and the resulting painting, the assistant is more physically involved in the execution of Pollock's instructions, and so in the fixation of Pollock's expression, than he was by setting up the machine in the Seventeenth View. But once again the fixed expression does not originate with the assistant, and so copyright law does not consider him to be the relevant legal cause of the outcome. Neither is he an intervening cause or disruption in the chain of causation between Pollock and the canvas. Because the assistant executes only the instructions given by Pollock, he is in effect an extension of Pollock, not unlike the artist's own hand or paintbrush.

Naturally, in the course of executing Pollock's instructions, it is likely that the assistant inadvertently introduces into the fixed work personal idiosyncrasies of the type deemed original in the

dictum of *Alfred Bell*.[108] But copyright law has tended to overlook or dismiss the significance of such spurious elements on the part of assistants executing the instructions of a principle creator. The minor original contributions counted as sufficiently expressive to confer authorship under the *Alfred Bell* principle are generally not considered to confer authorship on someone acting at another's direction. Indeed, cases involving assistants such as a camera operator or other creative factotum who executes the instructions given by the creator of the work do not treat such subordinates as originators of the work, even when their contributions are substantial or critical to the final form of the work.[109] They are undoubtedly causes in fact of the fixed expression, but causal precedence is attributed to the author who conceives of and directs the overall work.

Note that if the assistant is an employee acting within the scope of employment, or is employed in one of a number of contractually agreed-upon categories, the "work made for hire" doctrine delivers a similar result even if the assistant is not slavishly following Pollock's instructions.[110] The legal fiction of work made for hire designates the employer as the author of copyrightable employee creations.[111] In effect the employees become extensions of the employer's corporate personality, even when making creative choices regarding expression. The acts of the employee are attributed to the employer in a fashion familiar from the master-servant doctrines in tort law and elsewhere.[112] This occurs whether the employer is a single individual or a corporate entity. Some commentators have mistakenly equated this latter form of imputed authorship with "nonhuman" authorship,[113] but in fact it is a type of agency, regardless of the legal form of the principal.

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108. *See supra* note 45 and accompanying text.

109. *See* Andrien v. S. Ocean Cnty. Chamber of Com., 927 F.2d 132, 135–36 (3d Cir. 1991); Lindsay v. Wrecked & Abandoned Vessel R.M.S. Titanic, No. 97 Civ. 9248, 1999 WL 816163, at *5 (S.D.N.Y. Oct. 13, 1999).

110. 17 U.S.C. § 101 (defining "work made for hire"); *see also* Cmty. for Creative Non-Violence v. Reid, 490 U.S. 730, 751–52 (1989) (interpreting the meaning of "employee" under the work made for hire provision).

111. 17 U.S.C. § 201(b).

112. *See* RESTATEMENT (SECOND) OF AGENCY §§ 219, 250 (AM. L. INST. 1958); RESTATEMENT (THIRD) OF AGENCY § 7.07 (AM. L. INST. 2006).

113. *See, e.g.*, Kaminski, *supra* note 2, at 602.

21. Jackson Pollock explains to his assistant his methods of flinging paint at canvases with sticks and paintbrushes, including the criteria he uses for deciding on colors, type of brushes, distance from the canvas. Following these methods, the assistant independently produces a painting.

Unlike the Twentieth View, where the assistant meticulously fixes the patterns of pigments defined by Pollock, the assistant here is fixing expression over which he in one sense has control, even though he in another sense has relinquished control. The assistant is in control of the creation of the painting; he has no detailed instructions from Pollock as to the expression to be fixed, only general instruction as to methods. He has relinquished control in the same way that Pollock himself does, using Pollock's spontaneous and indeterminate methods. But the indeterminacy in the result is a volitional creative choice by the assistant. As with the indeterminate paintings executed by Pollock himself, the assistant need not know in advance the exact pattern that is ultimately fixed in order to be the author of that pattern.

Pollock in this View can be neither an author nor a co-author, having contributed no expression to the result. Pollock is a cause of the assistant's painting, but his contribution is attenuated and not proximate—Pollock has offered methodological advice and general ideas about the production of a painting. The resulting work was never the subject of Pollock's particularized mental labor; the specific work produced was conceived and executed by the actions of the assistant, who is the most direct physical cause of its fixation.

The completed painting will likely be in the style of Jackson Pollock—this is how genres or schools of artistic expression are born, by adoption of an originator's general formats, styles, and methods by subsequent artists.[114] Copying of the earlier creator's work occurs, but at an unprotectable level of abstraction. Despite some cases holding that the overall "look and feel" of a work may be protected by copyright,[115] style that is copied at a high level of abstraction generally tends toward the category of unprotectable idea rather than protectable expression. If, in this instance, Pollock's contribution to the work is limited to methods and ideas,

114. *See* Dan L. Burk, *The "Creating Around" Paradox*, 128 HARV. L. REV. F. 118, 121 (2015).

115. *See* Peter Lee & Madhavi Sunder, *The Law of Look and Feel*, 90 S. CAL. L. REV. 529, 539 (2017).

then no authorial expression found in the resulting work originates with him.

Thus, the expressive causal chain that ends in fixation goes back only so far as the assistant's actions. The causal link from the assistant back to Pollock traces the origin of methods and ideas, not the origin of particularized expression. Pollock cannot assert a copyright claim by virtue of having developed the methods used by the assistant.[116] The copyright statute specifically excludes methods of operation from its subject matter, so that Pollock cannot assert "authorship" of his painting methods if they are covered by intellectual property law at all, they might be covered by patent law, which includes utilitarian processes within its statutory subject matter.[117]

22. Pollock instructs his assistant in detail how to prepare his studio and activate his painting machine. The assistant, perhaps out of hubris, perhaps out of spite, disobeys Pollock's instructions, repositioning the machine and canvas to his own liking, and choosing paint colors of his own liking. He then activates the machine, generating a painting.

This View is in essence the inverse of the Seventeenth View; far from following Pollock's detailed instructions so as to become an extension of Pollock's intent, the assistant deliberately flouts Pollock's instructions, frustrating Pollock's intent. Pollock is again in some sense the causal origin of the painting—his instructions prompted the assistant to engage the machine that generated the painting. (The assistant's relationship with Pollock may also be the cause of the assistant's minor rebellion.) But the expression that is fixed in this View cannot be traced back past the insubordinate assistant—it originates with him and not with Pollock. Alternatively, we may view the assistant's independent and—quite literally—unauthorized actions as superseding whatever expression might have originated with Pollock. Neither is Pollock likely to be a co-author: first because it is unclear that any of Pollock's expression was comingled with the assistant's in fixation, and second because there was no intent to create a "joint

116. 17 U.S.C. § 102(b) (excluding methods and processes from the subject matter of copyright).

117. 35 U.S.C. § 101 (listing processes as a category of patent eligible subject matter); *see also* Baker v. Selden, 101 U.S. 99, 102 (1879) (holding that patent law, and not copyright, is the proper regime for exclusivity in functional processes).

work."[118] Pollock had no intent to collaborate, and indeed the assistant does not appear to have intended to combine his expression with Pollock's to yield a unified whole.

23. Pollock instructs his assistant to set up the paint spewing machine in any way he likes, selecting the colors, the position of the machine, and the position of the canvas. Pollock then activates the machine, generating a painting.

In this View, Pollock initiates the production of a painting by the machine but is not the author of the painting produced. Although Pollock is the direct and immediate cause of the painting, having activated the machine to set the process of fixation in motion, Pollock neither mentally conceives nor physically contributes any authorial expression to the final work. Thus, he is not a legally relevant cause or contributor to the work that is produced. Indeed, this View is to some extent the converse of the Seventeenth View in which the assistant sets up and activates the machine according to Pollock's orders; here Pollock is executing the assistant's vision of the resulting work, initiating the machine activity without defining any of its creative parameters.

24. Jackson Pollock organizes a studio after the fashion of Renaissance masters: there are several apprentices in the studio who produce paintings according to Pollock's instructions. Most of the work on a given painting is executed by an apprentice, but periodically Pollock intervenes in the work of the apprentices to alter, adjust, or finish the paintings they are producing.

The type of studio production contemplated in this View has a long history in artistic fabrication, including both classical and modern examples. Such studios, whether organized by Raphael or Andy Warhol, situate creative production within teams in which the physical work of fixation was primarily undertaken by less skilled or less known cadres of apprentices.[119] This sort of assembly line production served both to routinize artistic output and to train apprentices, but in any event, the results of the studio

118. *See* 17 U.S.C. § 101 (defining "joint work").

119. Laura A. Heymann, *Dialogues of Authenticity*, *in* 67 STUDIES IN LAW, POLITICS, AND SOCIETY 25, 34–35 (Austin Sarat ed., 2015).

were attributed to the master of the studio, even though physically fabricated by other hands. As Professor Heymann points out, such works were considered "authentic" in that they stand in a causal relationship between a particular provenance or set of circumstances.[120] We have seen that the act of fixation may be executed by another for both copyright authorship and ownership, and so too for purposes of authenticity.[121] But for purposes of authenticity, the expression, too, may be chosen by someone other than the "authentic" or authorizing creator; authenticity seems associated with the idea conveyed and acceptance of the expression of that idea by the artists to which authenticity is attributed.[122]

Thus, although studio works might be attributed to the master for purposes of artistic authenticity, the attribution of copyright authorship would depend on the degree of oversight that the master was exercising over the apprentices in the workshop. If Pollock were exercising a high degree of control and oversight, so that the apprentices are engaged entirely or almost entirely in fixing Pollock's expression, it may be that they are the equivalent of the diligent assistant in the Twentieth View, and the apprentices executing the detailed instructions of the master may simply be regarded as human tools or extensions of the senior artist's intent. As in the Twentieth View, it is likely that some degree of personal quirk or style becomes fixed by the apprentice along with the instructed expression. But unlike the artistic quirks considered original in *Alfred Bell*, such personal quirks by the agent executing the fixation of the painting are not attributed to the person who stands most immediately and directly in the chain of causation resulting in the painting; they are rather subsumed in the expression attributed to the "master mind" who is directing the overall project.[123]

Second, as also pointed out in the Twentieth View, if the apprentices qualify as employees acting within the scope of their employment, Pollock as the employer may be legally considered the author as a matter of work made for hire.[124] This will be the case even if the apprentices are operating with a high degree of independence, selecting the expression to be fixed. For the output to be considered work made for hire, the origination, selection,

120. *Id.* at 28–29.

121. *See supra* notes 97–98, 110 and accompanying text.

122. *See* Heymann, *supra* note 119, at 35–38.

123. *See* Aalmuhammed v. Lee, 202 F.3d 1227, 1235 (9th Cir. 2000).

124. *See supra* note 100 and accompanying text.

fixation of expression cannot be entirely independent, as it must be bounded by the apprentices' employment status. But within the boundaries job description, and the strictures of time, place, and oversight that indicate employment, the latitude to make creative and original choices regarding a work made for hire may be quite broad.

However, it is quite possible that in a "studio" organization, neither of these outcomes will apply. The students may well not meet the criteria for employment; their relationship with Pollock may be closer to that typical of students rather than employees—they may well not be paid, or receive employment benefits, or any benefit other than that of learning from a senior artist. It is additionally quite possible that they are not directed or overseen to the degree necessary to make them Pollock's creative extensions. If Pollock is merely signing his name to the apprentices' work, or adding a few de minimis corrective brush strokes that would not rise to the level of original expression, then copyright law might regard the work as entirely attributable to the authorship of the apprentices. For Pollock to be a co-author, the parties must both intend to produce a unified work and contribute copyrightable expression.[125] No doubt the contributors in the studio meet the former requirement for intent, but if Pollock is merely signing his name, the work leaving the studio may simply be a misattributed work of a student author.

25. Jackson Pollock leaves the door to his studio unlocked. Thirty to fifty feral hogs charge through the studio, upsetting paint cans and splashing paint all over a canvas.

The painting—which is to say, the pigment on canvas—in this View is not an expressive work and pretty clearly has no author. Certainly, the hogs are not authors. Even absent current interpretations of copyright law that exclude nonhuman creators from being authors,[126] there is no indication that the hogs had or could form any intent to express themselves in a tangible medium. Like the wind in the Third View, the hogs are the actual causes or origin of the paint on canvas. Unlike the wind, which current Western attitudes view as being an entirely natural (if chaotic)

125. 17 U.S.C. § 101 (defining "joint work").

126. *See* Naruto v. Slater, 888 F.3d 418, 426 (9th Cir. 2018); Kelley v. Chi. Park Dist., 635 F.3d 290, 304 (7th Cir. 2011) ("[A]uthorship is an entirely human endeavor. Authors of copyrightable works must be human . . . .") (citation omitted).

phenomenon resulting from physical gradients in atmospheric temperature and pressure, hogs are viewed as possessing not only independent mobility, but a degree of intelligence as well as volition. Nonetheless, as nonhuman actors, they constitute a natural force whose paint splashing lacks expressive content. Pollock is of course not entirely absent from the chain of causation; the studio, canvases, and paints are left in their places by him, and the door was left unlocked by him. But the painted canvas results neither from his intent to fix expression, nor from any direct act of fixation that might indicate such intent. The natural and proximate result of leaving a door unlocked is unlikely to be fixation of images by wild hogs, and it seems safe to say that the hogs are an independent intervening and superseding cause, much like the mechanical malfunction in the Nineteenth View.

26. Jackson Pollock trains an elephant to hold a paintbrush in its trunk, dip the paintbrush into paint, and fling paint across a canvas, producing random splatters of color.

The immediate active cause of the painted image in this View is neither human nor mechanical, but animal. The scenario is not fanciful, as there are numerous reports of elephants being trained to paint, although much of the result appears to derive from signaling by their trainers.[127] A fundamental consideration to the authorship question is the degree to which the elephant's activity has a causal and legal character similar either to that of the human assistant or to that of the machine. The elephant's potential as a superseding and intervening disruption in the chain of expressive causation will depend on its ability to interpose either original expression or random and natural content between Pollock and the fixed image.

The View also invokes the recent copyright case involving a monkey named Naruto, who has become the darling of AI enthusiasts probing the concept of nonhuman copyright authorship. In the Ninth Circuit Court of Appeals decision affirming dismissal of a lawsuit brought on behalf of the monkey, asserting authorship, the court relied on lack of statutory standing

127. *See, e.g.*, Desmond Morris, *Can Jumbo Elephants Really Paint? Intrigued by Stories, Naturalist Desmond Morris Sets out to Find the Truth*, DAILYMAIL (Feb. 21, 2009, 9:25 PM), https://www.dailymail.co.uk/sciencetech/article-1151283/Can-jumbo-elephants-reallypaint--Intrigued-stories-naturalist-Desmond-Morris-set-truth.html [https://perma.cc/9MVU-SLVA].

to decide the case; because Congress did not provide for animals to have standing under the statute, no suit could be maintained.[128] This holding is related to authorship—as an author would presumably have standing under the copyright statute—but never reaches the question of origination of expression.[129] The monkey took photographic "selfies" of his own image using a camera provided by a photographer.[130] Every indication is that the photographer staged and provided the environment for the monkey to take the photographs.[131]

In both the hypothetical and the actual cases of animal "artistry" there is a human hand at work, situating and arranging the materials for creation. Neither the elephant (nor the monkey) set out to buy paints and brushes, rent a studio, set up canvases, and begin producing artistic works. Pollock sets up the conditions for the production of the painting, as would be the case for his painting machine, but here the elephant substitutes for the machine. Rather than programming the machine with punch cards or other software, Pollock trains the elephant with a painting routine that is etched into elephantine carbon memory. The conditions for the fixation of an image were entirely constructed by a human, who consequently is the relevant legal and proximate cause of the resulting image.

Like the intentional wind painting discussed in the Fourth View, or for that matter the assistant in the Twentieth View, the elephant is in some sense a tool used by Pollock, a natural force employed to fix expression on the canvas. This would clearly be the case if Pollock used the animal as a paint conduit more directly, such as by coating its feet in paint and inducing it to trample across a horizontally laid canvas. Training the elephant to use a paintbrush adds a more anthropomorphic air to the exercise, but the animal is a painting tool in either case. If an untrained or undirected elephant that applied paint to canvas by happenstance would constitute a natural cause like the feral hogs in the Twenty-Fifth View. But here Pollock has harnessed the elephant's behaviors and placed the elephant in an environment that allows production of a finished work. The elephant is at minimum a natural force intended to fix expression, such as the intentional use of wind in the discussion of the Fourth View.

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128. *Naruto*, 888 F.3d at 420, 426–27.

129. *Id.* at 424, 426.

130. *Id.* at 420.

131. *See* Balganesh, *supra* note 15, at 2–3 (summarizing from various sources the circumstances surrounding the incident).

The elephant of course may not be precisely executing a design imagined by Pollock and may introduce a degree of randomness or indeterminacy into the design. But we have determined that precision is not needed for authorship. The same randomness or indeterminacy characterizes Pollock's use of the paint spewing machine in the Sixteenth View, and for that matter is also the case for Pollock personally flinging paint from a brush. If the elephant deviates radically, randomly, and accidentally from Pollock's conception of the work (perhaps by kicking over cans of paint) then the unoriginal result lies in the public domain.[132] If the elephant deviates insubstantially from Pollock's conception, then the variations likely fall within the *Alfred Bell* range of authorial indeterminacy.[133]

In no case is the elephant (or the monkey) a candidate for authorship, falling toward the side of mechanical or accidental creation and not that of human creation. It should be clear at this point that under the proper conditions, Pollock's human assistant can generate original expression, and that under no conditions can Pollock's mechanical painting machines do so. There may be a range of scientific and philosophical positions as to whether animal intelligences express themselves in the artistic or aesthetic sense, but from a copyright perspective such discussion appears to be irrelevant. From a purely formalist perspective, the general sense of the Ninth Circuit is surely correct that Congress has not provided for animal authorship in the copyright statute. From a policy perspective, there is no credible argument that bestowing authorship on elephants will induce more elephants to generate paintings for the benefit and edification of the public. As Professor Balganesh points out, animals may be the cause in fact of either injuries or paintings, but in neither case does the law hold them to be a proximate cause that is legally responsible for the outcome.[134]

132. *See* McCutcheon, *supra* note 14, at 715, 717 (noting that natural forces may forestall authorship by disrupting the causal chain between the creator's thought and fixation).

133. *See supra* note 45 and accompanying text.

134. *See* Balganesh, *supra* note 15, at 55.

27. After Jackson Pollock's death, his estate continues to set up the machine he built to randomly spew paint across canvases. The estate sells the paintings as "Jackson Pollock originals."

We have previously established in View Seventeen that temporal distance does not necessarily pose an obstacle to authorial causation. In this View, the fixation of pigments is temporally distant from Pollock's activities, but so far removed that Pollock is no longer alive at the moment of fixation. Although Pollock designed and built the machine, making him a cause in fact for anything the machine produces, the output of its operation cannot any longer be said to originate with Pollock. He is no longer available to physically activate or direct the use of the machine. He no longer can be said to intend the use or output of the machine. Although Pollock conceived and instantiated the method of the machine's operations, methods of operation are expressly barred from copyrightable subject matter.[135] Only the tool of expression remains. Indeed, it may be that whoever activates the machine after Pollock's demise is the author of its output, having initiated its operation.

This is not the case if Pollock's heirs continue to use his gear-driven or programmable machines from Views Twelve and Thirteen, nor for the lithographic press from View Eleven, if used to produce further copies of Pollock's works. If Pollock's expression in the copperplate, or in the paintings he executed in life, remain after his demise, so too may the coded expression in the punch cards or the gear-driven machine from the Twelfth View. The output of these image-pressing machines is determined and fixed, so that instantiating new copies from their operation fixes expression recorded in the initial engravings. The copperplate, the gear train, or the punch cards constitute copies, meaning fixations of the work formulated by Pollock. We can be fairly confident that such determinate records of Pollock's expressions were, at least at the time of fixation, intended by him and representative of the images as he mentally formulated them.

But it seems doubtful that this is the case for the machine that randomly generates paintings. The machine produces new and unexpected fixations of paint; it is not a record or means of accessing expression already fixed. This is a hindrance both from an evidentiary and an evaluative standpoint. We cannot know if the random patterns created by the machine are within the

135. 17 U.S.C. § 102(b).

expressive parameters expected by Pollock, as he is no longer available to evaluate the output. The patterns produced by the machine might just as well be the result of malfunctions as the result of Pollock's intent. Unlike the copperplate, gear-driven, or punch card-directed machines, we have no template of expression directly attributable to Pollock against which to compare the random painting machine's output. The machine's operation itself in some sense disrupts or intervenes in the causal chain of expression between itself and Pollock.

28. Jackson Pollock dies. His estate continues to bring the trained elephant into his art studio to fling paint across canvases. The estate markets these as "Jackson Pollock originals."

Any attribution to Pollock of the expression fixed in the painting from this View is at least as dubious as that of the machine in the Twenty-Seventh View. Pollock was the initial cause of the elephant's painting, having trained the elephant, but that initial action is rendered sufficiently remote by Pollock's demise that he can no longer be considered the proximate or legally relevant cause. Neither can we be confident that the elephant, having a degree of independent agency, is fixing expression that originated with Pollock in the manner that we are confident of the programmed machine generating expression that originated with Pollock. Pollock trained the elephant, but without Pollock present to ratify the fixation as conforming to his intent, we cannot be certain what originated solely with the elephant and what might have come from Pollock. Expression fixed solely by the elephant is attributed not to the elephant's trainer, but to natural forces, the same as random fixation of paint by an errant wind or by rampaging feral hogs.

29. Jackson Pollock meditates and communes with the Great Spirit. Afterwards, he goes into his art studio and flings paint across a canvas. He tells friends and relations that his painting was inspired by a higher power.

Although he is motivated or inspired by what he characterizes as an outside influence, Pollock in this View remains the author of the work that he fixes. Authors may be inspired by any of an infinite variety of creative influences—religious encounters, natural beauty, everyday occurrences—without the resulting

expression being attributed to the external stimulus. The sources of inspiration are undoubtedly "but for" causes of the work produced by the artist, as the resulting creative work would not have taken the shape and form it does without those influences on the artist. But copyright law typically assumes that the passage of those creative influences through the artist's interpretation results in the artist adding creative originality to whatever is drawn from the initial source.

There have been some cases involving photographic reproduction of public domain works that have indicated that the resulting photograph lacked authorial originality because it too faithfully reproduced the source; such slavish reproduction lacks the minimal requirement of creativity needed for copyright to attach.[136] But these cases involve fixation of external and physical phenomena, about which there could be an objective consensus as to their representation. Such outcomes are closely tied to the copyright subject matter exclusion of facts; even though facts are subjectively experienced, they are assumed to have independent existence outside the author's mind, and so are assumed not to originate with the author. It is unclear what it would mean to so faithfully reproduce experiences, impressions, or emotions that their artistic representation could be said to originate outside the author's mental state. Certainly, it would seem that shock, wonder, awe, anger, ecstasy, or other emotive states even though they may be prompted or influenced by external stimuli are such integral parts of the artist's subjective mental state that their expression is always original.

30. Jackson Pollock meditates and communes with the Great Spirit. Afterwards, he goes into his art studio and flings paint across a canvas. He tells friends and relations that the result was not his work, as he had been possessed by a higher power that expressed itself using his body.

Unlike the Twenty-Ninth View, where a spiritual encounter is asserted as the motivating factor that prompts Pollock's own expression, the expression in this instance is alleged to originate entirely elsewhere. The expression here is attributed directly to a nonhuman transcendent source, rather than being interpreted or filtered through human experience. This assertion essentially

136. *See, e.g.*, Bridgeman Art Libr. v. Corel Corp., 36 F. Supp. 2d 191, 197 (S.D.N.Y. 1999).

disclaims authorship by claiming that the fixed expression does not originate with Pollock. Indeed, depending upon how the details of the transcendent authorship are couched, it may be that the act of fixation is attributed to nonhuman instigation as well. Claiming corporeal possession suggests that the speech, text, or image that is fixed is done so under the control of another force, and not under the control of the human medium. Human intent is disclaimed in favor of action according to the intent of the higher power. In such cases, the act of fixation may be considered involuntary, or at least nonvolitional. The act is not accidental or reflexive, but neither is it autonomous.

Although such claims of possession or transcendence are scientifically implausible, copyright law has tended to adopt a neutral position toward such assertions of nonhuman authorship—perhaps a prudent stance to take in a system that relies upon dubious metaphysical assumptions for assigning mundane human authorship.[137] A surprising number of court decisions have engaged assertions of nonhuman authorship proceeding from the terrestrial intervention transcendent or spiritual beings.[138] Rather than confront the factual plausibility of such claims, courts have tended to reason around them. Under the doctrine of "copyright estoppel," federal courts will accept at face value the assertions of plaintiffs regarding the nature or origin of works for which they seek to assert exclusive rights.[139] Taking this stance with regard to transcendent authorship avoids difficult evidentiary questions regarding the actual origin of the works; where the parties agree or stipulate that the work is of transcendent origin, the court treats it as such.

Thus, although courts in these cases have been skeptical about the extension of the copyright statute to allegedly nonhuman authorship, they have tended to sidestep the issue by focusing instead on expression arising demonstrably from human origin.[140] For example, in the *Urantia Foundation* opinion, the United States Court of Appeals for the Ninth Circuit accepted at face value the assertions of the parties that the texts over which

137. *See* Burk, *supra* note 32, at 597, 604 (noting that copyright doctrine assumes that the formulation of original expression stands outside the causal order of the universe).

138. *See, e.g.*, Penguin Books U.S.A., Inc. v. New Christian Church of Full Endeavor, Ltd., 55 U.S.P.Q.2d (BL) *1680, *1689 (S.D.N.Y. July 25, 2000); Oliver v. St. Germain Found., 41 F. Supp. 296, 299 (S.D. Cal. 1941).

139. *See* Thomas F. Cotter, *Gutenberg's Legacy: Copyright, Censorship, and Religious Pluralism*, 91 CALIF. L. REV. 323, 345–46 (2003).

140. *See* Balganesh, *supra* note 15, at 26–27.

they were litigating had been dictated to humans by spiritual beings and so could not be the subject of copyright.[141] The court instead rested its decision on the selection and arrangement of the texts by believers, which could constitute human authorship of a compilation.[142] A court similarly faced with Pollock's assertion of possession might hold that Pollock's assertion waives authorship, or that he is estopped to assert authorship of works he also asserts did not originate with him.

31. Jackson Pollock ingests a number of controlled substances and then goes into the studio and flings paint across a canvas. He later tells friends and relations that he has no recollection of creating the resulting painting.

This View raises questions about authorial intent and volition under chemically altered mental states. As depicted in the View, historical use and abuse of recreational substances has been known to occur among copyright authors (indeed, the historical Jackson Pollock suffered from alcoholism).[143] The influence of such substances may be seen across a range of fixed expression, from works recording chemically induced experiences, to works inspired by such experiences, to works fixed or executed in the course of such experiences. The experiences and altered mental states induced by recreational chemicals in some instances probably impair the user's creativity, but in many cases may contribute to the unique perspective or expression found in the user's artistic works. Depending on the substance in question, the user may experience losses of motor control or mental discipline, memory losses could occur, and intent or volition could be affected.

Such chemical impairment may have implications for the presence of necessary mental states in tort or criminal law, but probably not for the formulation of original expression under copyright. Although the substances introduced into the artist's physiology are in some sense external influences of expression, they are not treated as superseding or intervening causes, or as expressive sources originating external to the author. The expression that is ultimately fixed does not reside in the

141. Urantia Found. v. Maaherra, 114 F.3d 955, 958–59 (9th Cir. 1997).

142. *Id.* at 959.

143. DEBORAH SOLOMON, JACKSON POLLOCK: A BIOGRAPHY 106, 238 (First Cooper Square Press ed. 2001) (1987); STEVEN NAIFEH & GREGORY WHITE SMITH, POLLOCK: AN AMERICAN SAGA 317–18 (1989).

substances; they induce expression in the author. In the usual course of creative expression, authorial thought and action arise from the functions of a variety of neurotransmitters; these affect both intent and the content of the expression that is fixed. We typically view whatever internal cocktail of serotonin and dopamine that gives rise to authorial expression as integral to authorial expression. Additional substances that are voluntarily introduced into the brain are treated as any other chemical source of original expression, rather than as an outside source.

32. Jackson Pollock converses with a friend who describes a scene. Pollock is inspired by the description and paints the scene.

Although Pollock's friend originates the idea for Pollock's painting, the visual expression fixed here originates with Pollock. As indicated in the Twenty-Ninth and Thirty-First Views, whether the motivating factor for Pollock's expression is a chemical substance, a spiritual experience, or a human interaction, the fixed expression is assumed to originate with Pollock so long as the friend's description provides only general inspiration that is then particularized as artistic expression. Unlike the motivating factors in the previous Views, the motivation here comes from another human, and so from a potential originator of expression. But if the friend is providing only an abstract idea, all the copyrightable expression that is fixed originates with Pollock. The friend is a cause in fact of the painting, having motivated Pollock to paint it, but the proximate cause is Pollock, who fixes original expression in pigments on canvas.

Note, however, that if the friend's description is something more than an abstraction, Pollock may be incorporating nonoriginal expression into the fixed work. If Pollock is illustrating narrative description supplied by the friend, the result could be a mixture of expression originating from the two contributors. Some courts have held that visual depiction of a detailed textual portrayal results in a work of joint authorship; the illustrator may be seen as incorporating into expression originating with the textual narrative.[144] This is a type of cross-media translation, in which details supplied in the narrative text become images fixed in the illustration. But in the case of Pollock's highly abstract images, where there may be little correspondence between the friend's narrative description and the image that is

144. *See, e.g.*, Gaiman v. McFarlane, 360 F.3d 644, 661 (7th Cir. 2004).

fixed, any discernable expressive contribution from the description may be filtered out in Pollock's creative process. At a minimum there may be an evidentiary disconnection between narrative detail originating with the friend and graphic expression fixed by Pollock, making joint authorship difficult to prove.

33. Jackson Pollock's friend paints a scene. Pollock sees his friend's painting, is inspired, and paints his own version.

In the previous View, Pollock was inspired by, and attempted to express as an image the narrative related by another person. Here, rather than a communicated idea, Pollock is in this View motivated by having seen the idea expressed. This type of scenario is most often considered in the context of infringement, where copying of another's original expression violates the originator's right of reproduction in the copyrighted work.[145] Such copying need not be intentional or conscious; some cases have held that inadvertent or unconscious copying still constitutes infringement.[146]

Copying that constitutes infringement by definition cannot constitute original expression; copied expression originates elsewhere and is transmitted via the copyist to the infringing creation. Leaving infringement aside, the same logic must hold true for authorship; copied expression cannot be original. In infringement analysis, the permissibility of copying is assessed according to levels of abstraction; copying particularized expression infringes, whereas copying abstract ideas or concepts does not.[147] Again, this logic carries over to authorship; a causal chain tracing ideas past Pollock does not change the origination of his expression, but a causal chain tracing expression past Pollock means he is not the originator.[148] If Pollock draws abstract ideas or concepts from the prior art, he remains the author of his fixed expression based on those ideas, but he cannot be the author of copied expression.

As in infringement, this logic presumably holds true for unconsciously or inadvertently copied expression: it originates somewhere other than Pollock, whether or not he realizes. But

145. *See* 17 U.S.C. § 106.

146. *See, e.g.*, Bright Tunes Music Corp. v. Harrisongs Music, Ltd., 420 F. Supp 177, 180–81 (S.D.N.Y. 1976).

147. *See* Nichols v. Universal Pictures Corp., 45 F.2d 119, 121 (2d Cir. 1930).

148. *See* Becker, *supra* note 29, at 614.

here we must tread carefully, as we have noted from the very first View on that creators are influenced by myriad antecedent factors, including the expression fixed by their predecessors. Originality is in some way a conglomeration of antecedents refracted through the consciousness of the author. There will be a fine distinction between inadvertent unoriginal transmission of expression and inadvertent unconscious originality. Infringement analysis is often concerned with dividing permissible influence from impermissible copying, and we see here that the same must be true for authorship.

34. Pollock takes a degree in computer science and designs a machine learning system that will analyze digitized versions of his paintings, then produce a new painting in his "style" based on the patterns it extracts.

In this View, Pollock's authorship of the resulting painting is fairly straightforward: he is the direct, actual, and proximate cause of the outcome, which he intends to occur. Pollock designs and implements the machine learning system. The inputs into the system comprise Pollock's original expression. The AI system simply constitutes yet another tool that Pollock may use to effectuate his intent to fix a design in a tangible medium. Although Pollock does not know exactly what output will emerge from the analytical system, such indeterminacy has been a permissible dimension of his authorship of works fixed by means of any previously considered creative tool, whether from his personally wielding a paintbrush to fling paint at a canvas, engaging an animal to fling paint at a canvas, or engaging a mechanical device to fling paint at a canvas.

Considered in isolation, ignoring its context, the machine might be perceived to be acting autonomously to produce paintings, but we have already determined in the Twelfth View that this is not the way to consider machine output. Admittedly, Pollock is not directly coding into the system the output that he expects from the AI as he did for the machines in the Twelfth or Thirteenth Views. In this instance there is not a one-to-one correspondence between the code Pollock writes and the patterns generated by the machine. Rather, based on the data Pollock supplies to it, the machine alters its own program to fit its output to the statistical patterns it finds in the data from digitized Pollock graphics. Nonetheless, Pollock creates the situation and makes creative choices regarding the system's operation, just as he might

for a photographic apparatus or for the random paint spewing machine in the Sixteenth View. There is no question of the AI being the author of the output, just as there would not be for a camera or an elephant. Pollock as programmer sets the parameters for developing and accepting the machine's product, he chooses the data to be analyzed by the machine, and he sets the machine's actions in motion.

35. Jackson Pollock dies. Following his death, other painters are inspired by his works and produce their own similar works following his methods.

The fixation of expression by Pollock makes possible ongoing influence on the works created by future generations, despite the gap in temporal and physical proximity created by Pollock's demise. Pollock neither personally fixes nor expressly directs the fixation of these posthumous works. As in the case of his generally instructed assistant in the Twenty-First View, Pollock is clearly a "but for" cause of the genre or school of creators that follow him.[149] Their work would not take the shape or form it does without the influence of his work. But if what is passed down this causal chain is generalized style or ideas rather than particular expression, then whatever expression is fixed by his successors does not originate with Pollock. Indeed, during the posthumous period of his copyright, artists working in the Pollock tradition will need to avoid taking protectable expression from his work if they are not to be considered infringers. They are likely the authors of what they fix, assuming the particulars are original with them, but Pollock is not.

36. A computer scientist trains a neural network by digitizing Jackson Pollock paintings and feeding the data into the system. The machine then generates a new painting in the style of Jackson Pollock.

This View is effectively the project that has become the current darling of the AI world, "The Next Rembrandt" project, in which a machine learning system was trained on scanned data from the 346 known paintings by Rembrandt van Rijn, and then

149. *See supra* notes 114–16 and accompanying text.

generated a new painting based on the patterns it derived.[150] Although this provides a new and somewhat catchy tool for creating visual content, the trajectory of Views that we have followed to this point should demonstrate that it raises almost nothing new in terms of copyright authorship analysis.

As in the Thirty-Fifth View, in this View the fixed expression that survives him continues to influence the production of new works of authorship after Pollock's death, albeit through the medium of an AI system. Unlike the production of the new Pollock work in the Thirty-Fourth View, Pollock is no longer present to use the machine learning system as an authorial tool; rather, someone else is using it to generate a work in Pollock's style. As in the Thirty-Fourth View, inputs to the analytical system are Pollock's works, entailing his original expression, but their use to generate a new work is neither initiated nor intended by Pollock. Although his actions in fixing expression during his lifetime are causes in fact for the machine generated work, his death and the subsequent actions break the causal chain for purposes of authorship, just as they would for painters in the "Pollock School" who are using paintbrushes rather than computers.[151]

As in the case of the "Pollock School" painters influenced by Pollock's surviving works, in this view the AI programmer is the causal originator of whatever original expression makes its way to the canvas. In many instances, the designer, programmer, trainer, and user of the AI system may be different individuals; for simplicity's sake in this View, one human has done all the work. The programmer is posthumously generating a work in the style of Jackson Pollock just as the painters inspired by Pollock's work in the Thirty-Fifth View; the programmer uses different tools than the painters in the Jackson Pollock school or genre. Whether the tools employed are statistical analyses filtered through silicon memory or the human hand and eye filtered through carbon memory, the result is derived from but not authored by Pollock. To the extent that the output of the AI fixes original expression, it occurs as a result of design choices, training, and initiation of the analytical system.

Note that as in the Thirty-Fourth View, in no way does the machine learning system behave volitionally, intentionally, or

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150. *See* Katherine Noyes, *AI Just 3D Printed a Brand-New Rembrandt, and It's Shockingly Good*, PCWORLD (Apr. 7, 2016, 11:54 AM), https://www.pcworld.com/article/3053520/ai-just-3d-printed-a-brand-new-rembrandt-and-its-shockingly-good.html [https://perma.cc/6TSW-ZG3S].

151. *See supra* text accompanying note 149.

autonomously. For any given AI system, a human designed and wrote the program that constitutes the machine learning algorithm. One or more humans selected the training data for the algorithm. One or more humans determined the statistical parameters for the program, modulating overfitting or underfitting of the data. Numerous human choices were made in generating the resulting output. If there is an author, it is one or more of the humans who are sufficiently causally proximate to the production of the output.[152] In some instances, there may be joint authors. In some instances, none of them may be sufficiently causally proximate to claim authorship, and there will be no author, as in the case of an errant wind or feral hogs.[153] But the author is never the machine.[154]

The posthumous Pollock programmer of course does not know in advance exactly which form the Pollock-style output will take, as this is an "emergent" property of the system, but we have repeatedly seen in the previous Views that exact or deterministic fixation of expression is not necessary for copyright authorship. The form that the machine's output takes may be a surprise to its designer, trainer, or user, but happy surprises are frequent in artistic authorship. There must be a general intent to fix expression, but not an intent to precisely fix expression. To the extent that the analytical system extracts the overall "idea" or concept of a Pollock painting, it captures something that originates with Pollock, but not expression that originates with Pollock.

Neither does our analysis here change significantly if the training or analysis data is not drawn exclusively from Pollock. The initiators of the output may use the complete works of Salvador Dali, Pre-Raphaelite paintings exhibited between 1848 and 1857, graphics from the top ten selling manga artists, or a combination of all these. Neither does it particularly matter whether the training or analytic data are drawn from visual representations; like the paint-spewing machine of the Sixteenth View, the machine's visual output might be based on weather patterns, or stock exchange indices, or traffic patterns in midtown Manhattan. These are all inputs to a creative digital tool being

152. *See* Samuelson, *supra* note 2, at 1192, 1202–04.

153. *See* Megan Svedman, *Artificial Creativity: A Case Against Copyright for AI-Created Visual Artwork*, IP THEORY, Winter 2020, art. 4, at 6–7, https://www.repository.law.indiana.edu/cgi/viewcontent.cgi?article=1053&context=ipt [https://perma.cc/QJY8-BJR8] (arguing that programmers may be too causally removed from AI outputs to constitute proximate authorial causes).

154. *Cf.* Zylinska, *supra* note 6, at 54–55 (arguing that artistic creation always occurs in an assemblage of human and nonhuman actors).

used by contemporaneous human originators; if there is an author to the output, he or she will be found among those contemporaneous human originators.

There may of course be original expression from one of the data sources that is carried through the process to the final output. Our inquiry here regards authorship of the resulting painting, although questions of infringement are clearly implicated. A number of previous commentators have opined on the issue of infringement arising from copying protected works into a machine learning environment as AI training data.[155] Here I set aside the infringement question, except to the extent that it may shed light on the provenance and transmission of original expression. If the system's graphic output includes concrete components of expression originating with Pollock, there may be an infringement question, as there would be with a painting directly from the brush of a human Pollock devotee who appropriated protected expression from Pollock's works. But for purposes of authorship, we simply note that expressive components originating with Pollock, passing through the hands of the programmer and his device to the final canvas, cannot be attributed to the programmer's authorship, as their origin lies further up the chain of causation than the programmer.

III. CONCLUSION

Copyright authorship is often lamented to constitute an incoherent and impenetrable doctrinal morass. But as I have shown here, authorship takes on greater coherence when evaluated in terms of causation, intent, volition, and related doctrines that are familiar from other areas of law. Professor Balganesh has correctly argued that explicit recognition of causation would improve the coherence of copyright authorship; the same is surely true for the full suite of legal principles that I have explored here.[156] And indeed, the supposed puzzle of

155. *See, e.g.*, Benjamin L. W. Sobel, *Artificial Intelligence's Fair Use Crisis*, 41 COLUM. J.L. & ARTS 45, 80–81 (2017) (discussing the dependence of artificial intelligence learning on fair use); Amanda Levendowski, *How Copyright Law Can Fix Artificial Intelligence's Implicit Bias Problem*, 93 WASH. L. REV. 579, 619–30 (2018) (discussing the potential of fair use to create less biased commercial AI systems); *cf.* James Grimmelmann, *Copyright for Literate Robots*, 101 IOWA L. REV. 657, 665–67 (2016) (arguing that large-scale robotic scanning or copying is permissible as a fair use).

156. *See* Balganesh, *supra* note 15, at 48–49. I am, however, chary of Professor Balganesh's call for a formal enactment with burdens of proof and so on. *Id.* Certainly I would not recommend such for volition, intent, and related principles that I have identified

mechanical authors becomes far less puzzling when these familiar doctrines are explicitly recognized to govern the allocation of copyright authorship.

That these are inherently operating in copyright should come as no surprise; the mechanisms I have illustrated here offer a relatively fungible tool kit for solving certain doctrinal problems in implementing law. These doctrines provide linkages between behaviors and outcomes, and the purpose of tort or criminal law is to encourage or discourage certain behaviors, linking human action to legal consequences.[157] Copyright similarly links actions with outcomes,[158] although it is concerned with allocating rights rather than responsibilities, rewards rather than sanctions,[159] and those differences may sometimes matter. Like any good tool kit, the doctrines illustrated here may be deployed in a variety of situations, though the objectives of their deployment may alter the particulars of their implementation.

For example, the proximity principle in tort appears in a number of guises; it may sometimes limit duty,[160] or it may at other times limit damages.[161] The most recent attempt at restating the principle has advocated combining such manifestations under the term "scope of liability."[162] We have seen here that causation in copyright will operate similarly, sometimes placing boundaries on the requirement of fixation, sometimes placing boundaries on the requirement of expression, sometimes placing boundaries on the requirement of originality. Others have shown that it also places limits on copyright infringement liability.[163] It may be that,

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here. The better course seems to me for the courts to simply recognize mechanisms already in operation.

157. *See* RESTATEMENT (SECOND) OF TORTS § 9 cmt. a (AM. L. INST. 1965) (defining legal causes as those connecting responsibility with harms); Simons, *supra* note 16, at 469 (describing mental states in criminal law as connected to conduct, circumstances, and results).

158. Balganesh, *supra* note 15, at 54–55 (arguing that copyright is intended to link outcomes to actions).

159. *Cf.* Wesley Newcomb Hohfeld, *Some Fundamental Legal Conceptions as Applied in Judicial Reasoning*, 23 YALE L.J. 16, 30–32 (1913) (articulating a theory of legal correlatives).

160. *See, e.g.*, Palsgraf v. Long Island R.R. Co., 162 N.E. 99, 100 (N.Y. 1928) (limiting duty on the basis of physical and logical proximity).

161. *See, e.g.*, Pruitt v. Allied Chem. Corp., 523 F. Supp. 975, 976, 980 (E.D. Va. 1981) (limiting damages on the basis of claimants' legal proximity to a chemical spill).

162. RESTATEMENT (THIRD) OF TORTS: LIAB. FOR PHYSICAL & EMOTIONAL HARM ch. 6, special note on proximate cause (AM. L. INST. 2010).

163. *E.g.*, Wendy J. Gordon, *Copyright and Tort as Mirror Models: On Not Mistaking for the Right Hand What the Left Hand is Doing*, *in* COMPARATIVE LAW AND ECONOMICS 311, 324–25 (Theodore Eisenberg & Giovanni B. Ramello eds., 2016).

taken together as in torts, these might be formulated as a generalized "scope of creation" or "scope of authorship." But in their nascent forms, it seems best to identify the different strands of causality individually.

Similarly, depending on the type of law in question, this familiar tool kit may be used to construct a wide range of legal structures with different purposes. In different circumstances, the tools function in more or less the same fashion but are adapted according to different objectives. Causation in tort is not quite the same thing as causation in criminal law, nor is causation quite the same even between negligence and intentional torts. We should not expect that it will perform in quite the same way for copyright authorship as it does for negligence or criminal law, either, as its direction will be informed by the policy goals associated with copyright.

The constitutional mandate for copyright is to "promote progress."[164] Consequently, the general policy of copyright law is conceived not so much to punish, to compensate, or to deter, but to incentivize, remunerate, and reward. Copyright is intended to confer a benefit that results in new creative works, rather than to discourage behaviors that result in harm or recompense the victims of harms. To be sure, these characterizations are not unqualified; in each instance the creation of rights and powers comes with correlative duties and liabilities.[165] Copyright effectuates its goals not only by encouraging investments; it also discourages certain infringing behaviors. Neither is copyright alone in encouraging investments; tort and criminal sanctions inevitably encourage investments in safety and security. But as Wendy Gordon suggests in the infringement context, tort and copyright may sometimes have reciprocal or "mirrored" doctrinal inversions due to the focus of one on internalizing harms and the other on internalizing benefits.[166]

Thus, copyright policy may inform the proximate cause determination in rather different ways than those in more familiar settings. For example, Gordon observes in the context of copyright infringement that, just as tort declines to internalize some harms, copyright should decline to internalize some benefits.[167] Benefits should be left "where they lie" whenever propertizing them does

164. U.S. CONST. art. I, § 8, cl. 8.

165. *See* Hohfeld, *supra* note 159, at 31–32, 52–53.

166. Gordon, *supra* note 163, at 319–20.

167. *Id.* at 313, 320.

not enhance creative incentives—possibly because the mechanism of internalization is too costly, or because the system has otherwise already reached an incentive maximum.[168] The same may surely be said for authorship rather than for infringement, for the creation of the entitlement rather than its enforcement. Some creative work should be (and is) excluded from authorship and left "where it lies" when recognizing the entitlement would not advance copyright policy, particularly the incentive purposes of the statute.

Leaving creations "where they lie" in authorship doctrines means that in some cases there will be no author, and the creation will simply fall into the public domain. In general, this will be the right result where there is no need for a legal incentive, or the incentive is gratuitous. There is no need to offer a legal incentive to prompt Duchamp to display a urinal in his exhibition; the object has already been created for a different need and is simply adopted to convey Duchamp's message. Similarly, there is no need to offer an incentive when Pollock trips and splashes paint; the accidental fixation of the paint pattern occurs purely by happenstance not by incentive. Causation doctrines as outlined above can cull such situations from the pool of potentially copyrightable works.

Thus, the causation doctrines we have discussed here provide one set of mechanisms for achieving copyright's goals; we may determine that a given creator or a given activity is too far removed from the desired incentive to be recognized as an author. Sometimes that decision may be justified on the basis of cause in fact, where the connection between the act and the incentive is too attenuated to be effective. In other cases, the exclusion may rest on other legally proximate considerations, where the factual linkage is strong, but the logical relationship is poor.

It would be tempting in copyright to simply say "place authorship on whoever is best induced to create," and leave the whole thing at that, without a lot of causal sophistry. After all, the universe of "but for" actors in either tort or copyright is potentially infinite, and so we ultimately must choose among them those on whom liability or authorship will rest. That choice is ultimately dictated by the policy purposes of each legal regime. But as in tort or criminal law, where courts will be reluctant to abandon cause in fact, they give some guideposts. Creators who are closer in physical proximity to the fixation of a work are more likely to be proper choices as authors, just as in tort actors who are in closer

168. *Id.* at 320–21.

physical proximity to a harm are more likely to be the proper policy choices for liability. Creators who are closer in temporal proximity to the fixation of a work are more likely to be proper choices as authors, just as in tort actors who are in closer temporal proximity to a harm are more likely to be proper policy choices for liability. When an actor is too far removed from the relevant act in time and space, their ability to avoid a given harm or to create a given work diminishes.

Such considerations give us a rough cut at where to place authorship, and at times we may reach farther back along the chain of causality to find the least cost avoider or best incentivized creator. A number of the Views discussed here illustrate such choices in search of the copyright author; in some cases, the outcome is indeterminate, and no proper author can be found. Often this is an evidentiary matter; the costs of search and proof to find the author or the tortfeasor are simply too high to be borne in comparison to the expected policy outcome. Tort will sometimes uncouple liability from factual causation, waiving the need to prove the causal connection where the evidentiary showing is prohibitively expensive or difficult, or sometimes elevating the compensation goals of tort over the formalities of proof.[169] Perhaps copyright will in some situations do the same. But when the procedural costs are too high or the policy choice too ambiguous, we may choose to leave the harm or the benefit where it lies. Here the distinction between the two systems is stark: in copyright, leaving the benefit where it lies means dedicating it to the public; in tort, leaving the costs where they lie means that they usually fall on the victim.

Much of this policy calculus will be couched in utilitarian terms, in part because the tally of costs and benefits is our primary framework in the United States for considering copyright, just as it has been for tort or criminal jurisprudence. But those areas also incorporate into their policies strong deontological concepts regarding fairness, autonomy, or retribution. Moral justifications such as fairness or desert are not entirely absent from copyright jurisprudence. But unlike criminal or tort law, desert theories are limited in their application to copyright, at least so far as labor theories of desert are concerned, because of the Supreme Court's rejection of effort as a criterion for copyright. American copyright does not encompass any creation that is not original and

169. *See, e.g.*, Sindell v. Abbott Lab'ys, 607 P.2d 924, 936–37 (Cal. 1980) (basing liability on market share of a fungible drug where evidence of causal link to a manufacturer was lacking).

minimally creative, no matter how much effort is expended on its creation.[170] Still, copyright jurisprudence unquestionably entails hints of fairness rationales, and of a sort of negative labor theory, that an infringer should not be permitted to appropriate value created by another.[171] Although copyright is not formally intended as a hedge against misappropriation or unjust enrichment, it sometimes justifies its outcomes on such theories.

170. Feist Publ'ns, Inc., v. Rural Tel. Serv. Co., 499 U.S. 340, 345–46 (1991).

171. *See* Dennis S. Karjala, *Copyright and Misappropriation*, 17 U. DAYTON L. REV. 885, 896–97 (1992) (discussing labor-desert policies in copyright); Wendy J. Gordon, *On Owning Information: Intellectual Property and the Restitutionary Impulse*, 78 VA. L. REV. 149, 166–67, 266–68 (1992) (discussing misappropriation and unjust enrichment themes in intellectual property).