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## Fixed Perspectives: The Evolving Contours of the Fixation Requirement in Copyright Law

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FIXED PERSPECTIVES:  
THE EVOLVING CONTOURS OF THE FIXATION  
REQUIREMENT IN COPYRIGHT LAW

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ABSTRACT

*To qualify for copyright protection under the current Copyright Act, a work must, inter alia, be fixed in a tangible medium of expression. This requirement is easily met when a work is embodied in a historical medium of mass expression like a printed book, photograph, or audio recording. However, when an author departs from such established media of fixation, the requirement can create a more significant barrier to copyrightability. Three decades ago, digital media provided one such challenge. Today, authors and lawyers alike are pushing the conceptual boundaries of communicative media, and this has led to some controversial recent judicial decisions on fixation. This Article contextualizes and explores the implications of those decisions. It also points out some of the practical and conceptual pitfalls that lawyers and courts may encounter in similar cases as the limits of fixation are further tested.*

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## INTRODUCTION

Fixation is a key component of federal copyright law: it is what separates protectable from unprotectable original works of authorship. It is the reason why a novel utterance is not protected but a novel sound recording is. While copyright law creates intellectual property rights, the fixation requirement ensures that the intellectual property right can be tied to a physical object. To put it another way, an author's work needs an avatar to qualify for protection. The process of fixation merges "original work and tangible object . . . in order to produce subject matter copyrightable under the [Copyright Act]."<sup>1</sup> Only once this merger has occurred is a work properly copyrightable.

Fixation is necessary because only fixed works are at risk of misappropriation by copying. Copyright law is grounded in the incentivization of artistic *production*, not mere creativity. As a matter of policy, copyright encourages making and distributing works that can communicate expression to others far and wide. Its imposition of limited monopoly rights is interest charged on the debt we owe to the printing press. The net effect of these

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<sup>1</sup> H.R. REP. NO. 94-1476, at 51 (1976).

requirements is familiar and fundamental to copyright law: an expression only constitutes a copyrightable work if it can be reproduced, performed, displayed, or distributed. Copyright protects things that can be copied, not things that can be imitated.

The historically dominant media of mass expression are the progenitors of the fixation requirement: printed books and periodicals, paintings, photographs, film, and musical recordings are the sort of media that copyright law has long championed. There is a practical, if not a legal, presumption that works in these media are appropriately fixed. But more difficult cases have emerged in recent years as unusual media of expression have had their day in court. These cases bring to the forefront questions about which types of works copyright law encompasses. In considering these questions, we must also consider, as a policy matter, which types of works copyright should incentivize as creators test the boundaries of authorship and expression.

### I. THE FIXATION REQUIREMENT

The fixation requirement is defined in 17 U.S.C. §102(a), which applies copyright protection to “original works of authorship *fixed in any tangible medium of expression*, now known or later developed, *from which they can be perceived, reproduced, or otherwise communicated*, either directly or with the aid of a machine or device.”<sup>2</sup> Section 101 offers further insight: “A work is ‘fixed’ in a tangible medium of expression when its *embodiment . . . is sufficiently permanent or stable* to permit it to be perceived, reproduced, or otherwise *communicated* for a period of *more than transitory duration*.”<sup>3</sup> By combining these provisions, the

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<sup>2</sup> 17 U.S.C. § 102(a) (2006) (emphasis added).

<sup>3</sup> 17 U.S.C. § 101 (emphasis added) (definition of “fixed”). The statute also requires that embodiment be in a “copy” or “phonorecord.” Copies are in turn defined as “material objects, other than phonorecords, in which a work is fixed by any method now known or later developed, and from which the work can be perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.” *Id.* (definition of “copies”). Phonorecords, on the other hand, are restricted to “material objects in which sounds, other than those accompanying a motion picture or other audiovisual work, are fixed by any method now known or later developed, and from which the sounds can be

requirement seems reducible to four basic elements: (1) encoding of expression (2) in a physical medium (3) that can convey that expression to others (4) and can persist unaltered for some appreciable time. Notably, only the first of these elements involves creative activity by the author; the latter three are qualities of the medium in which the author encodes the expression.

The fixation requirement can be satisfied in a number of situations. The author can make the material copy before the work is ever presented to an audience.<sup>4</sup> The author can make the material copy *while* the work is first being presented to an audience.<sup>5</sup> The author can even direct another person to make the first copy.<sup>6</sup> In each case, the key is that the expression is preserved in some persistent communicative medium, some useable vehicle for later communication. This is what separates copyable (and thus potentially copyrightable) expression from uncopyable expression.

#### A. *The Origins of Fixation*

For most of the history of copyright law, fixation has not been an issue. It was simply an undifferentiated part of the authorship process,<sup>7</sup> while copyrightable subject matter was confined to rigid

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perceived, reproduced, or otherwise communicated, either directly or with the aid of a machine or device.” *Id.* (definition of “phonorecords). These definitions accomplish little more than dividing acceptable media of fixation into (1) audible media and (2) all other media of expression.

<sup>4</sup> See 17 U.S.C. § 101 (definition of “fixed”).

<sup>5</sup> *Id.* (“A work consisting of sounds, images, or both, that are being transmitted, is ‘fixed’ for purposes of this title if a fixation of the work is being made simultaneously with its transmission.”); see also *Baltimore Orioles, Inc. v. Major League Baseball Players Ass’n*, 805 F.2d 663, 675 (7th Cir. 1986) (holding that simultaneous recording of a baseball game constitutes fixation of the players’ performances).

<sup>6</sup> 17 U.S.C. § 101 (definition of “fixed,” noting that fixation may be accomplished “by or under the authority of the author”); see also H. R. REP. NO. 94-1476, at 51–2 (exploring fixation in the context of a directed broadcast).

<sup>7</sup> It was, in fact, Congress’s expansion of the concept of authorship that necessitated the fixation requirement. In refusing to confine authorship to certain categories of works, Congress chose to broaden the concept of a work. See H. R. REP. NO. 94-1476, at 51–2. The fundamental qualities of the concept of a work, it seems, were human agency, expression, and fixation. *Id.*

categories rather than defined by flexible concepts and qualities. The first U.S. Copyright Act, enacted in 1790, applied quite specifically to maps, charts, and books only.<sup>8</sup> Congress extended protection to musical compositions in 1831.<sup>9</sup> In 1909, the list of categories was greatly expanded to include periodicals, prepared speeches, dramatic compositions, drawings, prints, photographs, and “works of art.”<sup>10</sup>

Only when this periodic expansion seemed destined to continue ad infinitum did Congress attempt to craft a more flexible solution. This solution was to make the subject matter requirement dependent on the qualities of its creation rather than on the categorization of expressive products.<sup>11</sup> While Congress did not abandon entirely the attempt to categorize works of authorship—indeed, it expanded those categories yet again<sup>12</sup>—it chose not to confine copyright protection to its enumerated categories.<sup>13</sup> Suddenly, fixation mattered as a concept.

The historical media of authorship all required fixation, and in an important way they defined the concept. They were media, but they were a particular *kind* of media. They were media that involved an encoding of expression in a durable physical form. They could be distributed, experienced, kept, and reused. Most importantly, they could be copied. Their value was intertwined with their vulnerability. Copyright law incentivized their creation by addressing the vulnerability while preserving the value.

But as technology advanced and the panoply of expressive media expanded, a more fluid concept was required to keep pace. Recognizing that “[a]uthors are continually finding new ways of expressing themselves, [and] it is impossible to foresee the forms that these new expressive methods will take,” Congress added the fixation requirement as a sort of flexible gatekeeper for the

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<sup>8</sup> Copyright Act of 1790, 1 Stat. 124 § 1; *see also* H. R. REP. NO. 94-1476, at 51–2.

<sup>9</sup> Copyright Act of 1831, 4 Stat. 436 chap. 16.

<sup>10</sup> Copyright Act of 1909, Public Law 60-349 § 5.

<sup>11</sup> *See* H. R. REP. NO. 94-1476, at 51–2.

<sup>12</sup> *See* 17 U.S.C. § 102(a)(1–8).

<sup>13</sup> 17 U.S.C. § 102(a) (“Works of authorship *include* the following categories . . . .”) (emphasis added); *see also* H. R. REP. NO. 94-1476, at 51–2.

protection of new media.<sup>14</sup> Yet, despite the flexibility afforded by trading fixed categories for their defining conceptual quality, new technology still managed to create confusion over copyrightability as the digital revolution began.

### *B. Fixation in the Digital Age*

Digital works presented two different problems for fixation, one of technological literacy and one of categorical characterization. Digital works appeared, at least to the untrained user, to be intangible by nature. Since copyrightability turned on whether an expressive medium was also a tangible medium, courts were called on to determine tangibility. At the same time, the emergence of interactive digital works—specifically, video games in their industrial infancy—challenged courts to assess what characteristics must be unchangeable to qualify as a fixed work.

#### 1. The Tangibility of Digital Works

The question of tangibility was the simplest for the courts to answer. Despite a general lack of institutional competency with regard to new technologies, courts were able to arrive at a workable solution by analogy. At least one early court that considered the issue held that programs could not be fixed in computer memory, likening such memory to building plans.<sup>15</sup> Yet the legislative history behind the Copyright Act showed that the development of computer programs and other digital works was a key impetus for the shift from categorical protection to the flexible fixation requirement.<sup>16</sup> Taking this into account, courts began to look at the question more practically, and a consensus emerged that most memory media were adequate media of fixation.<sup>17</sup> The

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<sup>14</sup> See H. R. REP. NO. 94-1476, at 51.

<sup>15</sup> *Data Cash Sys., Inc. v. JS&A Grp., Inc.*, 480 F. Supp. 1063, 1066 n.4 (N.D. Ill. 1979) (concluding in dictum that a computer program could not be fixed in memory because the memory was analogous to a playback device, not a tangible medium of expression).

<sup>16</sup> H. R. REP. NO. 94-1476, at 52.

<sup>17</sup> *E.g.*, *Tandy Corp. v. Pers. Micro Computers, Inc.*, 524 F. Supp. 171, 173

key to these decisions was that humans could encode computer programs—which the courts agreed were works of authorship—onto the memory for later playback. While computer memory operated in some sense as a playback device, it was the fact that it could store a work for playback that made it an acceptable medium of fixation. That made memory more similar to the historical media of fixation—the media of mass publication—than to a mere playback device.

## 2. Interactivity and Fixation

Interactivity proved somewhat more difficult, though courts again ended up in accord on the issue. In *Williams Electronics, Inc. v. Artic Int'l, Inc.*, the Third Circuit considered whether an inherently changeable work could be fixed.<sup>18</sup> The plaintiff in that case, the producer of the early video game *Defender*, sued a copycat producer for effectively replicating the game. *Defender* had two modes: the “play mode” and the “attract mode.” The latter consisted of a rotating series of set animations and sounds showing examples of what the game was like when played. The court had little difficulty concluding that this mode was fixed for purposes of copyright protection; while the presentations were generated anew from computer memory each time, they followed set patterns and therefore were always the same expression.<sup>19</sup> The game code and art and music assets were the sort of “machine or device” contemplated by the § 101 fixation definition.

The “play mode” at issue in *Williams* was more problematic because the actual order and arrangement of the audiovisual presentation depended on user input. When a user played the game, the arrangement of the art assets and the timing of animations and

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(N.D. Cal. 1981); *Stern Electronics, Inc. v. Kaufman*, 669 F.2d 852, 855 n.4 (2d Cir. 1982); *Williams Electronics, Inc. v. Artic Int'l, Inc.*, 685 F.2d 870, 874 (3d Cir. 1982).

<sup>18</sup> 685 F.2d at 870.

<sup>19</sup> *Id.* at 874 (emphasis added); accord *Stern*, 669 F.2d at 856 (“[M]any aspects of the sights and the sequence of their appearance remain constant during each play of the game. . . . The repetitive sequence of a substantial portion of the sights and sounds of the game qualifies for copyright protection as an audiovisual work.”).



sound playback would change according to player's decisions and reactions. The actual course of the presentation was not fixed in the colloquial sense. Yet the court still held that the game satisfied the fixation requirement, since the player was interacting with copyrighted art and sound in set patterns determined by copyrighted instructions:

Although there is player interaction with the machine during the play mode which causes the audiovisual presentation to change in some respects from one game to the next in response to the player's varying participation, there is always *a repetitive sequence of a substantial portion* of the sights and sounds of the game, and many aspects of the display remain constant from game to game regardless of how the player operates the controls.<sup>20</sup>

Essentially, the court held that the player's "changes" were only to the manner of experiencing otherwise properly copyrighted elements. The game memory, code, and kit constituted a "device" that aided the player in experiencing these fixed elements. So long as the player could recreate the exact same inputs and timing (which was nearly impossible), the same patterns would occur. Even if exact reproduction did not occur, a "substantial portion" of the presentation remained the same. The game was therefore copyrightable, and the defendant was liable for copying it.

This same principle arose from other leading cases examining the issue, and quickly became a widespread rule.<sup>21</sup> Fixation was, generally speaking, no longer a barrier to the development of digital works and the massive industries they spawned. The new, flexible fixation requirement had passed its first big test. But that test was not to be its last.

## II. EMERGING BOUNDARIES TO MEDIA OF FIXATION

In recent years, a different sort of threat to our understanding of

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<sup>20</sup> *Williams*, 685 F.2d at 874.

<sup>21</sup> *See Stern*, 669 F.2d 852; *Midway Mfg. Co. v. Artic Int'l, Inc.*, 547 F. Supp. 999, 1008 (N.D. Ill. 1982).

fixation has arisen. This threat is not technological, but conceptual. Two cases—one involving conceptual artistry and the other involving creative lawyering—have brought the fixation requirement back into the limelight. This nascent line of case law began with the controversial 2011 case *Kelley v. Chicago Park District*<sup>22</sup> and was taken up later that year in the much less heralded case *Kim Seng Co. v. J & A Importers*.<sup>23</sup> In *Kelley*, the U.S. Court of Appeals for the Seventh Circuit provided controversial but nuanced reasoning distinguishing media of fixation from media inherently ill-suited to fixation. In *Kim Seng*, a California district court then took that reasoning and extended it in an apparent attempt to simplify and apply it to qualitatively similar media. While it is unclear precisely what conclusions should be drawn from this emerging line of cases, or even whether the line will be built upon further, the cases mark a significant turn in fixation jurisprudence toward circumscribing media of fixation according to qualitative characteristics of those media.

#### A. *Kelley v. Chicago Park District*

The beginnings of the new bounding of fixation began in *Kelley*.<sup>24</sup> In that case, the Seventh Circuit considered whether a “living art” piece comprising arrangements of planted wildflowers was sufficiently fixed to allow for copyright protection. The artist, Chapman Kelley, was a well-known Texas painter and landscape artist who conceived of the arrangement as a public work of conceptual art. He installed it in 1984 in Chicago’s Grant Park and maintained it for years afterward. However, the wildflowers became overgrown and the Chicago Park District heavily modified the arrangement, reducing its size and altering its geometry. Kelley opposed the changes and ultimately sued the Park District under the new Visual Artists Rights Act (VARA). VARA, which injects into the Copyright Act limited aspects of the moral rights (*droit moral*) that underlie much of European copyright law,<sup>25</sup> gives an

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<sup>22</sup> 635 F.3d 290 (7th Cir. 2011).

<sup>23</sup> 810 F. Supp. 2d 1046, 1051 (C.D. Cal. 2011).

<sup>24</sup> See 635 F.3d 290.

<sup>25</sup> VARA, codified at 17 U.S.C. §106A, implements a limited moral rights

artist the right to prevent modification of particular kinds of visual art, including sculptures. Kelley claimed that his “Wildflower Works” was a sculptural work, and thus subject to VARA. But to qualify as a sculpture, the work had to meet the general requirements for copyright protection as well.

Fixation proved the primary hurdle to copyright protection of the work.<sup>26</sup> Wildflowers were an unusual medium, one that needed continuous maintenance to achieve any real semblance of permanence. Kelley himself had described the concept for the piece as involving the “management” of living elements.<sup>27</sup> This management was apparently important to the conceptual expression Kelley intended. Unfortunately, it was also fatal to copyrightability, as it challenged the boundaries of permanence and made the source of authorship unclear.

The court found the concept of fixation to be fundamentally incompatible with the qualities of plant arrangements. “A garden's constituent elements are alive and inherently changeable, not fixed. . . . [I]ts appearance is too inherently variable to supply a baseline for determining questions of copyright creation and infringement.”<sup>28</sup> Essentially, the court found that, because plants are constantly growing, there is no point at which they can give rise to more than temporary, uncopyable images. The issue was with the very essence of the medium:

Seeds and plants in a garden are naturally in a state of perpetual change; they germinate, grow, bloom, become dormant, and eventually die. This life cycle moves gradually, over days, weeks, and season to season . . . . The essence of a garden is its vitality, not its fixedness. It may endure from season to

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regime for well-known works of visual art in the United States. *Kelley*, 635 F.3d at 297. In 1988, the United States signed the Berne Convention for the Protection of Literary and Artistic Works, but in several respects the country subsequently failed to comply with the treaty provisions. One such provision was protection of artists' moral rights, protected by Article 6bis. Congress enacted VARA to bring U.S. copyright law into compliance.

<sup>26</sup> *Kelley*, 635 F.3d at 303.

<sup>27</sup> *Id.*

<sup>28</sup> *Id.* at 304–05.

season, but its nature is one of dynamic change.<sup>29</sup>

The court could find no point at which the plants could be considered appropriately fixed, as they were always changing. Something *vital*, something living, could not be fixed—the essence of living is growth and mortality, not permanence.

Moreover, the court did not believe that a human could actually author a garden. The court described a garden as something a human could initiate and maintain, but not something that a human could actually create. The creative forces behind the wildflowers were not Kelley’s intellect and expressive act; they were the forces of nature, acting as they always do. “Most of what we see and experience in a garden—the colors, shapes, textures, and scents of the plants—originates in nature, not in the mind of the gardener.”<sup>30</sup> Because human expression is not what gives rise to the visual elements of the work, it is not an expressive work and is therefore not subject to copyright protection.

Notably, the court did not disagree with Kelley about the expressive potential of wildflower arrangements. Instead, the conceptual rift between them was over whether that expression came via a medium, from artist to viewer, or directly from nature to viewer (with the “artist” confined at best to a curatorial role). The court juxtaposed planted gardens with landscape designs. Such designs, it noted, are copyrightable because they make the artist’s expression reproducible.<sup>31</sup> A plant can grow on its own, but a drawn design cannot.

The court implied that non-static expressive media can exist, but they must be sufficiently static to allow for reproduction and transmission of the author’s expression.<sup>32</sup> The court noted, for example, that Alexander Calder’s continuously moving mobiles, animated by wind and other natural forces, were sufficiently fixed because the individual functional elements of the mobiles were “obviously fixed and stable.”<sup>33</sup> Similarly, a Jeff Koons wire-frame

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<sup>29</sup> *Id.* at 305.

<sup>30</sup> *Id.* at 304.

<sup>31</sup> *Id.* at 304–05.

<sup>32</sup> *Id.* at 305.

<sup>33</sup> *Id.* This example calls to mind the video game elements in *Williams*, individually fixed and functionally constrained by a set of rules authored by a

sculpture covered in living flowers was deemed likely copyrightable, as the frame should be enough to fix the expression.<sup>34</sup> The operative question in the Seventh Circuit's view is whether the work is "quintessentially a garden" (i.e., an "expression" of natural forces) or a work of art (i.e., a reproducible form of the *author's* expression).<sup>35</sup> Put another way, the court was concerned with whether nature or a human author produced the aesthetic elements of the work.

Wild plants, according to the *Kelley* decision, could not be directed by a human author, and therefore they could not serve as a medium of fixation. The court made it clear that its decision was categorical and essential. It deemed "vitality"—and, by implication, its less popular conceptual companion, mortality—the operative quality of the medium.<sup>36</sup> A proper medium of fixation, like the historical media of mass communication, would instead be characterized by "fixedness."<sup>37</sup> That is not to say that plants could not form a component of a copyrightable work, but such a work would have to be sufficiently fixed in another medium. This reasoning seemed to put a new gloss on Congress's intentionally open-ended language, effectively limiting fixation to media (old and new) that were *in essence* neither unpredictably protean nor inescapably progressive.

### B. *Kim Seng Co. v. J & A Importers*

What was not clear in the wake of the *Kelley* ruling was whether courts might extend the holding to apply to other sorts of

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human creator. *See Williams Electronics, Inc. v. Artic Int'l, Inc.*, 685 F.2d 870, 874 (3d Cir. 1982).

<sup>34</sup> It is logical to believe that a court would find only the non-living elements of the latter work copyrightable, although the court here expressly declined to offer its opinion on the issue. *Kelley*, 635 F.3d at 305–06.

<sup>35</sup> *Id.* at 306.

<sup>36</sup> *Id.* at 305.

<sup>37</sup> *Id.* The court thereby produced an odd sort of teleology of fixation: a unfixable seed becomes an unfixable tree, but in death (or severance) it becomes fixable wood—once dead, material that in life could not constitute a copyrightable work may be formed into any manner of sculptures, paintings, photographs, or books.

inherently non-static media. The Seventh Circuit focused so intently on the living essence of plants that its holding could rather easily be limited to planted gardens alone.<sup>38</sup> But at least one court has taken the bait and extended the *Kelley* holding to all inherently perishable media.

In *Kim Seng Co. v. J & A Importers*, the U.S. District Court for the Central District of California had to decide whether an arrangement of food was copyrightable as a matter of law.<sup>39</sup> The plaintiff, a maker of Vietnamese rice sticks, had asked its employee to arrange its rice sticks with some other traditional Vietnamese foods in a bowl in a traditional manner. An outside photographer then photographed the bowl, and the company used the picture on its packaging. Because it was unclear whether the company owned the copyright to the photograph, it claimed that the underlying arrangement was itself copyrighted, with the photograph constituting only a derivative work.

The defendant moved for summary judgment on grounds that perishable food, like the living plants discussed by the Seventh Circuit in *Kelley*, was an inherently inadequate medium of fixation. The court extended *Kelley*, but in the process simplified its holding as well:

Like a garden, which is “inherently changeable,” a bowl of perishable food will, by its terms, ultimately perish. Indeed, if the fact that the Wildflower Works garden reviving itself each year was not sufficient to establish its fixed nature, a bowl of food which, once it spoils is gone forever, cannot be considered “fixed” for the purposes of § 101.<sup>40</sup>

The court keyed in on the stability requirement mentioned in *Kelley*, seemingly holding that any physical form that deteriorates

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<sup>38</sup> Indeed, the court seemed to stop just short of limiting its holding in this very way by favorably discussing the Koons wire-frame work. *Kelley*, 635 F.3d at 305–06.

<sup>39</sup> 810 F. Supp. 2d 1046, 1051 (C.D. Cal. 2011) (considering plaintiff’s motion for summary judgment).

<sup>40</sup> *Kim Seng*, 810 F. Supp. 2d at 1054.

cannot be used to fix expression for copyright purposes. Where the *Kelley* court expressly declined to hold that physical impermanence necessarily conflicted with the “sufficient permanence” required by §101—indeed, it noted that “no medium of expression lasts forever,”<sup>41</sup>—the *Kim Seng* court found perishability dispositive of the fixation issue.

This extension was not made blindly. The court explained that “the purposes underlying the fixation requirement—to ‘ease[] problems of proof of creation and infringement’—apply with equal force to a garden and a bowl of perishable food.”<sup>42</sup> The district court, situated in the Ninth Circuit, was under no obligation to follow *Kelley*; it looked to it only as persuasive authority. And unlike the Seventh Circuit, the district court looked past issues of authorship and agency in favor of the evidentiary value of the fixation requirement. In effect, the court held that because food could not remain stable long enough to be offered as evidence in the event of an infringement claim, it could not serve as a medium of fixed expression.

By this logic, “sufficient permanence” necessarily entails sufficient stability to retain form and structure until the time of any likely trial. While the court stated quite clearly that food was inherently unfixable because it will “ultimately perish,” it could not have meant that *any* physical form subject to eventual deterioration cannot serve as a medium of fixation. Such a holding would render historical media, e.g. photographs and paintings, uncopyrightable because paint and ink will fade and discolor with exposure to the elements.<sup>43</sup> This would also be true of sound recordings made on audio tape, which degrade over time,<sup>44</sup> and might even extend to electronic memory media, which degrade

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<sup>41</sup> *Kelley*, 635 F.3d at 305.

<sup>42</sup> *Kim Seng*, 810 F. Supp. 2d at 1054.

<sup>43</sup> See, e.g., *Preservation: Photographs*, NATIONAL ARCHIVES, <http://www.archives.gov/preservation/formats/photographs.html> (last visited Mar. 22, 2014). Yet the *Kim Seng* court even noted that a photograph is “obviously” an appropriate medium of fixation. *Kim Seng*, 810 F. Supp. 2d at 1054 n.8.

<sup>44</sup> See generally Richard L. Hess, *Tape Degradation Factors and Challenges in Predicting Tape Life*, 34 ASS’N FOR RECORDED SOUND COLLECTIONS 240, 244–67 (2008).

steadily with use.<sup>45</sup> In fact, if one takes a long enough view, no physical form is truly immune from deterioration. Thus, the key to understanding *Kim Seng* lies in its mention of evidentiary necessity, not its discussion of perishability.

If evidentiary value is at issue, it would seem that the primary requirement for fixation would be that a medium be at least *capable* of maintaining communicative permanence for the term of copyright protection. Yet this finds surprisingly little support. The *Kim Seng* court cited to the treatise *Patry on Copyright* for the proposition that evidentiary necessity supported the fixation requirement.<sup>46</sup> That treatise, in turn, cited to Douglas Lichtman's 2003 article *Copyright as a Rule of Evidence*.<sup>47</sup> But Lichtman explained in that article that

the modern requirement excludes only those cases where there never was any physical evidence of the claimed expression; it does not exclude cases where there was evidence at some point in time, but that evidence was later lost or destroyed. Stated another way, federal law requires that fixations survive for a period of "more than transitory duration," but it does not require that fixations survive, say, until the moment of litigation.<sup>48</sup>

Oddly, *Kim Seng* seems to stand for exactly the opposite proposition yet indirectly cites to the article for support. Because of this, it is unclear where exactly courts looking to follow *Kim Seng*, or at least trying to interpret *Kelley* in the same way, should draw the line. If fixation requires something less than stability for the term of copyright but something more than the rapid degradation that characterizes perishable food, just how stable does a communicative medium need to be to qualify as a medium of

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<sup>45</sup> *Tech Guide: Storage Media Lifespans*, ZDNET (Oct. 14, 2002), <http://www.zdnet.com/tech-guide-storage-media-lifespans-1120269043>.

<sup>46</sup> *Kim Seng*, 810 F. Supp. 2d at 1054 (citing to 2 *Patry on Copyright* § 3:22).

<sup>47</sup> Douglas Lichtman, *Copyright As A Rule of Evidence*, 52 DUKE L.J. 683, 732 (2003).

<sup>48</sup> *Id.*



fixation?

### C. *A Look Toward the Future*

It remains to be seen whether other courts will follow the trail paved by *Kim Seng* and extend the notion raised in *Kelley* that authors simply cannot fix works in certain media. The intuitive allure of the idea is clear in both cases: how can you “fix” something that can change? But, as the *Kelley* court recognized, everything can and does change over time. Of course, categorical restrictions on media are heuristically useful as well; there is no need to determine whether a particular arrangement of plants or food is sufficiently permanent if no plants or food can be. But is this emerging approach really in line with congressional intent? And, as a policy matter, does it impose problematic restrictions?

As discussed above, Congress intended to create a flexible requirement that could adapt to new technologies and art forms. The video game cases represented an effort by courts to accommodate this intent. But categorical rejection of certain media could potentially upend that accommodation.

One issue that may be on the horizon involves a concept that computer scientists call “emergent behavior.” The concept encompasses unforeseen effects of designed programs and systems. More complex systems more frequently exhibit emergent behaviors.<sup>49</sup> Artificial intelligence programs, extraordinarily complex and difficult to predict with certainty, often exhibit these types of behaviors.<sup>50</sup> In fact, emergent behaviors may well be a key to producing artificial intelligence.<sup>51</sup> A human can program an artificial intelligence, and that program would seem to be copyrightable as a form of software. But if that software is subject

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<sup>49</sup> See generally Gerald E. Marsh, *The Demystification of Emergent Behavior* (2009), available at <http://arxiv.org/abs/0907.1117>.

<sup>50</sup> Pattie Maes, *Behavior-Based Artificial Intelligence*, in PROCEEDINGS OF THE FIFTEENTH ANNUAL CONFERENCE OF THE COGNITIVE SCIENCE SOCIETY, 74 (Lawrence Erlbaum Associates, 1993).

<sup>51</sup> See, e.g., Rodney A. Brooks, *A Robot that Walks: Emergent Behaviors from a Carefully Evolved Network*, Massachusetts Institute of Technology Artificial Intelligence Laboratory, A.I. Memo 1091 (1989).

to emergent behaviors unforeseen by the author, has it really been encoded as a work? Moreover, is such a work permanent in the sense that it can resist “deterioration” from the author’s original vision long enough to serve as evidence of it? Aren’t these programs more akin to wildflowers in a garden than to simple programs like *Defender*?

From a policy perspective, it would seem advantageous to society to incentivize creation of these sorts of works. Copyright law in general is usually justified as incentivizing production of expressive works, often for public consumption.<sup>52</sup> But if the fixation requirement impedes copyright protection for work deemed important, this incentivization will be suboptimal at best. This problem may extend to artificial intelligence programs. It may also extend to conceptual art expressed through gardens or even food. If federal copyright law does not protect these sorts of works, the states may wish to step in, since the protection of unfixed works is not preempted by the Copyright Act.<sup>53</sup>

While these concerns may not have been on the minds of the judges who decided *Kelley* and *Kim Seng*, judges looking to those cases as persuasive authority in the future would do well to keep the implications of those decisions in mind. If they do not, and especially if the courts further narrow the boundaries around media of fixation, the courts may ironically return copyright law to the place Congress left behind in 1976: confined to known media of expression in a continuously changing world.

#### CONCLUSION

The courts in *Kelley*—which pitted an intransigent artist against a cash-strapped municipal agency—and *Kim Seng*—which involved dubious claims and seemingly unfair competitive practices—may well have been looking for reasons to find a lack of copyright protection. But regardless of their intentions, the courts produced a new line of intriguing case law on fixation. In an ironic twist, the concept that Congress hoped would provide

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<sup>52</sup> 1 THE LAW OF COPYRIGHT § 1:3 (2010).

<sup>53</sup> 2 PATRY ON COPYRIGHT § 3:22 (2007).

flexibility for protection of expressive works in unknown future media may well prove a barrier to the protection, and therefore the incentivization, of such works.

Lawyers and judges alike should be aware of the turn in reasoning represented by *Kelley* and *Kim Seng*. The idea of categorical medium restrictions provides fertile soil for novel arguments and efficient rulings. But blind judicial acceptance of the potentially tantalizing approach is dangerous. The implications of the new *Kelley* line threaten to corral fixation, and therefore copyright law, within fences established by history and intuition rather than effective policy and legislative intent.

#### PRACTICE POINTERS

- When challenging the copyrightability of a work in a new or unusual medium, consider whether that medium is inherently self-changing or so obviously impermanent as to call into question its suitability as a medium of fixation.
- When arguing against such a fixation challenge, consider that both policy and legislative intent favor a flexible and accommodating fixation requirement.