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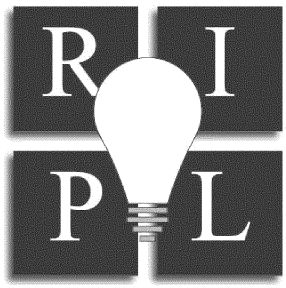

THE WISDOM OF LEGISLATING FOR ANTICIPATED TECHNOLOGICAL ADVANCEMENTS

YVETTE JOY LIEBESMAN

ABSTRACT

The past four decades have been witness to the realization of ideas which, when first contemplated, seemed to resemble the prose of science fiction writers. Some seemingly far-fetched notions, such as robot pets, anti-sleeping pills, and ugly unisex jumpsuits, are now readily available. However, there are currently no colonies on the moon, and we are all still waiting to order our personal jetpacks from Amazon.com. Some are likely to remain in the realm of science fiction and will only be realized with the help of movie and television special effects artists. Yet through these entertaining glimpses into a potential future, we are left to wonder whether the law should be adapted to account for some of these anticipated technologies. At various times, Congress has chosen to wait and see if a scientific advancement adapts sufficiently under current law, and in other instances, it has tried to anticipate how technology will affect society and legislate accordingly. This article discusses whether it is better to legislate in contemplation of new technology or to wait and see how it develops. To avoid tangential considerations regarding the scope, influence, and mechanics of existing technology that are unrelated to the policy concerns, the issues raised in this article are examined by exploring whether the underlying purpose of a current law, specifically the Copyright Act of 1976, could be satisfactorily applied to magically animated pictures and paintings developed in J.K. Rowlings' *Harry Potter* series. Using "magic" as the vehicle avoids these extraneous considerations, and the conclusions drawn can then be related back to unforeseen or developing scientific advances. As such, this article will discuss the application of aspects of the Copyright Act to a universe where the subjects of photographs and paintings are animated by magic, to determine if it is necessary to create legislation specific to this "technology" to address policy concerns regarding fixation and authorship. It asks whether current laws are adequate when applied to a world where magic exists, whether trying to legislate for future technologies is rational, and whether Congress should consider future potential technologies when contemplating or creating legislation, or whether such legislation stifles innovation. This article concludes that we should proceed with caution in allowing the potential effects of either technology in its infancy or future unrealized technology to influence our policy decisions before the science has had a chance to mature and develop, its effects on society better determined.

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"Any sufficiently advanced technology is indistinguishable from magic."[1]

INTRODUCTION

The past four decades have been witness to the realization of ideas which, when first contemplated, seemed to resemble the prose of science fiction writers.[2] Some, such as robot pets,[3] anti-sleeping pills[4] and ugly unisex jumpsuits[5] are now readily available. However, there are no colonies on the moon, and we are all still waiting to order our personal jetpacks from Amazon.com.[6] Some ideas seem likely to remain in the realm of science fiction, and will only be realized with the help of movie and television special-effect artists.[7] Yet through these entertaining glimpses into a potential future, we are left to wonder whether the law should be adapted to account for anticipated technologies.

 Assistant Professor, Saint Louis University School of Law. The author dedicates this article to the late Steven Goldberg for his unconditional support to pursue the topic, for his unwavering encouragement for her career aspirations, and for his unqualified joy in finally being able to call her a colleague. He will be truly missed. The author gratefully thanks Bob Brauneis for his input on the development of the initial idea. She also wishes to thank her research liaison David Kullman, research assistants Catherine Robertson and Benjamin Wilson, and her summer faculty fellows Alison Kish, Jack Ritchey and Renee Zerbonia. This article is also dedicated to all the physicists who continually stretch our understanding of science and the world, as well as science fiction nerds everywhere who really hope to someday use transporter technology to beam the contents of the Louvre into their living room.

[1] ARTHUR C. CLARK, PROFILES OF THE FUTURE 36 (Holt, Rinehart & Winston 1984) (1962).

[2] *E.g.*, Brad Stone, *Real World Robots*, NEWSWEEK, Mar. 24, 2003, at 42 (discussing various robots such as the robotic vacuum cleaner, iRobot, against the backdrop of Jetsons' robot, Rosie). While not quite of the same ilk as the Jetsons' robotic maid, iRobot serves essentially the same function. *See* IROBOT, http://store.irobot.com/home/index.jsp (last visited Sept. 30, 2010). For another example, Georges Méliès' imaginary moon landing in 1902 became reality in 1969. *Compare Le Voyage Dans la Lune* (Georges Méliès 1902), *with* John Noble Wilford, *Men Walk on Moon; Astronauts Land on Plain; Collect Rocks, Plant Flag*, N.Y. TIMES, July 21, 1969, at A1. *But see* DANIEL H. WILSON, WHERE'S MY JETPACK?: A GUIDE TO THE AMAZING SCIENCE FICTION FUTURE THAT NEVER ARRIVED (Bloomsbury 2007).

[3] WILSON, *supra* note 2, at 89.

[4] *Id.* at 101.

[5] *Id.* at 135. While ugly unisex jumpsuits do exist, thankfully we are not all forced to wear them.

[6] *Id.* at 15. It is also amusing to watch old television programs, such as the original *Star Trek* series, or movies which depict futuristic interstellar spaceships containing analog clocks and other outdated technology.

[7] Any current science fiction movie or television stretches our imagination with regard to anticipated technologies.

At various times, Congress has chosen to wait and see if a scientific advancement adapts sufficiently under current law,[8] and in other instances has tried to anticipate how technology will affect society.[9] For example, Congress and the courts have also taken a "wait-and-see" approach with regard to scientific evidence used in court.[10] Public policy dictates that caution should be exercised regarding the admissibility of new scientific tests in criminal and civil proceedings, and as such, proffered evidence is routinely scrutinized based on the *Daubert* Standard.[11]

And after years of development and limited regulation regarding access, "net neutrality" has now become a flashpoint.[12] One can debate whether Congress should have addressed this issue when it began to enact legislation governing the internet for issues such as the transmission of child pornography,[13] or if it was more prudent to take the "wait and see" approach and watch the technology unfold and step in when net neutrality became a more pressing public policy concern.[14] One problem faced, were they to legislate when a technology is in its infancy, is that Congress would continually be besieged (more than our representatives already are) by various competing interests to create legislation for the benefit of the interested parties.[15]

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[8] *See, e.g.*, Jerry Berman & Paula J. Bruening, *Can Spam be Stopped?*, LEGAL TIMES (June 16, 2003), *available at* WL, 2003 WLNR 18321377 (discussing difficulties involved with Congress legislating to specific technologies).

[9] *See, e.g.*, Audio Home Recording Act of 1992, Pub. L. No. 102-563, 106 Stat. 4237 (codified as amended at 17 U.S.C. §§ 1001–10 (2006)).

[10] *See* Paul R. Rice, *Advisory Committee on the Federal Rules of Evidence: Tending to the Past and Pretending for the Future?*, 53 HASTINGS L.J. 817, 823–24 (2002).

[11] *See* Daubert v. Merrell Dow Pharm., Inc., 509 U.S. 579, 594–95 (1993). *Daubert,* which laid the foundation for Rule 702 of the Federal Rules of Evidence, was "designed to ensure that 'any and all scientific testimony or evidence admitted is not only relevant, but reliable.'" United States v. Parra, 402 F.3d 752, 758 (7th Cir. 2005) (quoting Smith v. Ford Motor Co., 215 F.3d 713, 718 (7th Cir. 2000)). Rule 702 states:

> [i]f scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education, may testify thereto in the form of an opinion or otherwise, if (1) the testimony is based upon sufficient facts or data, (2) the testimony is the product of reliable principles and methods, and (3) the witness has applied the principles and methods reliably to the facts of the case.

FED. R. EVID. 702. In addition, when determining the reliability of expert testimony under Rule 702, courts continue to examine four non-exclusive factors identified in *Daubert:*

> (1) whether the theory or technique can be and has been tested; (2) whether the technique has been subject to peer review and publication; (3) the technique's known or potential rate of error and the existence and maintenance of standards controlling its operation; and (4) the level of the theory or technique's acceptance within the relevant discipline.

Huber v. JLG Indus., Inc., 344 F. Supp. 2d 769, 772 (D. Mass. 2003) (citing *Daubert*, 509 U.S. at 593–94). *See also* Kumho Tire Co. v. Carmichael, 526 U.S. 137 (1999) (applying *Daubert* principles to all expert testimony, regardless of whether basis is considered to be "technical" or "scientific").

[12] *See* Tim Barker, *Net Tangle Over Access Coming to Head at FCC*, ST. LOUIS POST-DISPATCH, Jan. 24, 2010, at E1.

[13] *See* Protecting Children in the 21st Century Act, Pub. L. No. 110-385, Title II, 122 Stat. 4103 (Oct. 10, 2008) (codified at 15 U.S.C. §§ 6551–55, 17 U.S.C. §§ 254, 503).

[14] *See* Statement, Julius Genachowski, Comm'r, Fed. Commc'ns Comm'n, The Third Way: A Narrowly Tailored Broadband Framework (May 6, 2010), http://www.broadband.gov/the-third-way-narrowly-tailored-broadband-framework-chairman-julius-genachowski.html.

[15] *See* Berman & Bruening, *supra* note 8.

This article argues that we should proceed with caution in allowing the potential effects of either technology in its infancy or future unrealized technology to influence our policy decisions before the science has had a chance to mature and develop, and its effects on society better determined.[16]

To avoid arguments which distract from the discussion, I have chosen to remove tangential considerations regarding the scope, influence, and mechanics of existing technology that are unrelated to the policy concerns. To accomplish this, the issues raised in this article are examined by exploring whether a current law, specifically the Copyright Act of 1976 (the "Act" or "Copyright Act"),[17] could be satisfactorily applied to magically animated pictures and paintings developed in J.K. Rowlings' *Harry Potter* series. By using "magic" as the vehicle, the technology at issue is not open to debate, thus avoiding these extraneous factors. The conclusions drawn can then be related back to unforeseen or developing scientific advances. As such, this article will discuss aspects of the Act to a universe where the subjects of photographs and paintings are animated by "magic," to determine if it is necessary to create legislation specific to this "technology" to address policy concerns regarding fixation and authorship.

At Hogwarts School of Witchcraft and Wizardry, and elsewhere in the Harry Potter Universe, images in photographs and paintings move about.[18] In the wizard's newspaper, the *Daily Prophet*, the Weasley family appears in a "moving photograph . . . waiving furiously" at the camera while enjoying their vacation at the pyramids in Egypt;[19] the Fat Lady[20] guarding the entrance to the Gryffindor Tower speaks, is sometimes asleep, other times awake, and has gone missing;[21] a photograph of Albus Dumbledore, the headmaster at Hogwarts, leaves his trading card;[22] and the image of former Headmaster Phineas Nigellus moves between his portrait in Hermione's bag and the one hanging at Hogwarts.[23]

Supposing these items exist, and assuming Congress would want such works to be copyrightable, one must determine whether they qualify for copyright protection under current United States law, and whether such characters would have authorship rights under the Act. The application of the Copyright Act to these

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[16] This is an issue sometimes discussed even within the genre. *See, e.g.*, *Star Trek: The Next Generation: "The Measure of a Man*" (Paramount Feb. 13, 1989) (the personhood of the android, Data, is on trial); *The Outer Limits* (ABC television series Sept. 16, 1963) (several episodes devoted to laws regarding DNA manipulation as well as the rights of non-humans); *see also infra* note 165 and accompanying text.

[17] 17 U.S.C. §§ 101–1332.

[18] *See* J.K. ROWLING, HARRY POTTER AND THE SORCERER'S STONE 103 (Scholastic Press 1998) [hereinafter SORCERER'S STONE] (describing a trading card where the picture on the card moves). This is the first exposure to this phenomenon in the series.

[19] J.K. ROWLING, HARRY POTTER AND THE PRISONER OF AZKABAN 8 (Scholastic Press 1999) [hereinafter AZKABAN].

[20] SORCERER'S STONE, *supra* note 18, at 129. This is how she is referred to in the HARRY POTTER books. No insult towards people who consider themselves to be overweight is implied or intended.

[21] AZKABAN, *supra* note 19, at 160. The Fat Lady was missing from her painting and the canvass slashed. *Id.*

[22] SORCERER'S STONE, *supra* note 18, at 103.

[23] J.K. ROWLING, HARRY POTTER AND THE DEATHLY HALLOWS 178 (Scholastic 2007).

magical objects in Harry Potter's universe could then be used to postulate how unforeseen, future technology could be affected by the Act.

This article argues that, as demonstrated through the application of the Act to the magically animated paintings in Harry Potter, it is not necessary to understand how a technology works in order to legislate for it.[24] We often may reasonably apply current legislation to new technologies and it may be unwise to pass bills based on probable, future technological advancements, which could result in unforeseen adverse consequences.[25]

This article is divided accordingly. Part I, will briefly describe the development of copyright law in the United States, the fixation requirement, and how it has been adapted to emerging technologies, through both specific and general legislation. Then, the fixation requirement of the Copyright Act of 1976 is applied to magically animated pictures and paintings developed in J.K. Rowlings' *Harry Potter* series. Part II briefly considers whether, under the Act the magically-animated figures in paintings and photographs in the Harry Potter universe could themselves be considered authors, and if works created by these characters are protectable works under the Act. The section then focuses on how authorship issues arise with the emerging technology of artificial intelligence. The article concludes in Part III with thoughts on whether, based on the previous discussion, trying to legislate for future technologies is rational, whether current laws are adequate when applied to a world where magic exists, and whether Congress should consider future potential technologies when contemplating or creating legislation, or whether such legislation stifles innovation.

I. HARRY POTTER AND THE FIXATION REQUIREMENT

"Harry turned the card back over and saw, to his astonishment, that Dumbledore's face had disappeared. 'He's gone!' 'Well, you can't expect him to hang around all day,' said Ron."[26]

With regard to the Copyright Act, courts have been able to adapt the law to the circumstances of a situation not contemplated by the Act.[27] At other times, Congress has enacted amendments when the current law was inadequate,[28] and on occasion,

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[24] *See* discussion *infra* Part II.

[25] *See* discussion *infra* Part III.

[26] SORCERER'S STONE, *supra* note 18, at 103.

[27] Sony Corp. of Am. v. Universal City Studios, Inc., 464 U.S. 417, 431 (1984).

> Sound policy, as well as history, supports our consistent deference to Congress when major technological innovations alter the market for copyrighted materials. Congress has the constitutional authority and the institutional ability to accommodate fully the varied permutations of competing interests that are inevitably implicated by such new technology. . . . [Where] Congress has not plainly marked our course, we must be circumspect in construing the scope of rights created by a legislative enactment which never contemplated such a calculus of interests.

Id.

[28] *See, e.g.*, Electronic Communications Privacy Act of 1986, Pub. L. No. 99-508, 100 Stat. 1848 (codified as amended at 18 U.S.C. §§ 1367, 2521, 2701–11, 3117, 3121–27 (2006)). The Electronic

legislation has been passed in anticipation of a technology that legislators thought would create future legal issues. For example, the Audio Home Recording Act of 1992[29] was an unsuccessful attempt at anticipating the commercial success of a technology.[30]

A. The Ever-Growing Subject Matter of Copyright

"The history of copyright law has been one of gradual expansion in the forms of works accorded protection."[31] The first "Copyright Act of 1790 granted protection to the author . . . of any map, chart, or book."[32] As noted by William F. Patry in his treatise on copyright law, in the 1789 Act, "the term 'book' was not defined, but was generally construed broadly"[33] to include "every character of publication; whether a volume, pamphlet, newspaper article, calendar, or catalogue."[34] Under the 1790 Act, the courts also interpreted "book" to include "a volume made up of several sheets bound together; it may be printed only on one sheet, as the words of a song or the music accompanying it."[35]

The 1831 Act expanded the list of works covered and provided exclusive rights for "printing, reprinting, publishing, and vending such book or books, map, chart, musical composition, print, cut, or engraving, in whole or in part."[36] While it was the

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Communications Privacy Act amended Title III of the Omnibus Crime Control and Safe Streets Act of 1968, which was designed to prohibit "all wiretapping and electronic surveillance by persons other than duly authorized law enforcement officials engaged in the investigation of specified types of major crimes after obtaining a court order." S. REP. NO. 90-1097, at 2 (1968), *reprinted in* 1968 U.S.C.C.A.N. 2112, 2113. The 1986 amendments expanded the protections for oral and wire communications to include protections for electronic communications, as Congress was concerned that the current law was inadequate to protect privacy in light of new technologies. *Id.*

> [T]he existing law [was] "hopelessly out of date." It [had] not kept pace with the development of communications and computer technology. Nor [had] it kept pace with changes in the structure of the telecommunications industry.
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> . . . .
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> These tremendous advances in telecommunications and computer technologies have carried with them comparable technological advances in surveillance devices and techniques. Electronic hardware making it possible for overzealous law enforcement agencies, industrial spies and private parties to intercept the personal or proprietary communications of others are readily available in the American market today.

S. REP. NO. 99-541, at 2–3 (1986), *reprinted in* 1986 U.S.C.C.A.N. 3555, 3556.

[29] Pub. L. No. 102-563, 106 Stat. 4237 (1992) (codified as amended at 17 U.S.C. §§ 1001–10).

[30] *See* Douglas Lichtman & William Landes, *Indirect Liability for Copyright Infringement: An Economic Perspective*, 16 HARV. J.L. & TECH. 395, 401 (2003) (discussing how the 1992 Act regulated Betamax tapes, which would not become a commercial success).

[31] H.R. REP. NO. 94-1476 (1976), at 51.

[32] WILLIAM F. PATRY, PATRY ON COPYRIGHT § 1:19 (2010). For additional reading on the history of United States copyright legislation, *see* Craig Joyce, *A Curious Chapter in the History of Judicature: Wheaton v. Peters and the Rest of the Story (of Copyright in the New Republic)*, 42 HOUS. L. REV. 325 (2005).

[33] PATRY, *supra* note 32, § 1:19 n.21.

[34] *Id.* (citing Brightley v. Littleton, 37 F. 103, 104 (C.C.E.D. Pa. 1888)).

[35] *Id.* (citing Clayton v. Stone, 5 F. Cas. 999, 1000 (C.C.S.D.N.Y. 1829) (No. 2,872)).

[36] Act of Feb. 3, 1831, ch. XVI, 4 Stat. 436.

first time there was "express protection for musical compositions,"[37] the 1831 Act, like the 1790 Act, did not contemplate forms that had yet to be invented, such as recorded music either on rolls for a player-piano,[38] recorded music, or any other future technology; the list of media eligible for copyright was finite.

At the beginning of the twentieth century, the Supreme Court was confronted with a seminal copyright case involving new technology.[39] The defendant, the Apollo Company, had transferred a melody from sheet music to a roll of paper with perforations that allowed the tune to be played on a player piano.[40] This new medium was not contemplated by the Copyright Act in effect at the time, which, like its predecessors, limited the subject matter of copyright to specific forms.[41] "[P]rior to 1909, mechanical devices, such as music rolls, discs and records, for the reproduction of sound, were held to be beyond the scope of the copyright laws and not to infringe protected works which they were the means of audibly reproducing."[42] In *White-Smith Music Publishing Co. v. Apollo Co.*,[43] the Supreme Court held that these perforated rolls of paper used in a pianola (a player piano) to play a song did not violate the copyright of the sheet music for that particular tune.[44] Partially in response to the Supreme Court's holding in *White-Smith Music*, Congress enacted a major revision to the Copyright Act in 1909,[45] which, while broadening the forms of works that could be protected by copyright,[46] continued to limit works to technology already in existence.[47]

B. Contemplating Future Technologies in the Copyright Act of 1976

The next substantive revision to United States copyright law, the Copyright Act of 1976,[48] adopted several major changes. The two relevant to this discussion are (1) the expansion of subject matter to include future technologies;[49] and (2) the change from protection through the observation of formalities to a system where protection

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[37] PATRY, *supra* note 32, § 1.23.

[38] *See* Ian McLaughlin, THE PLAYER PIANO PAGE (last updated Jan. 25, 2006), http://www.pianola.com/. A player piano, also called a "pianola," is a self-playing piano which came into vogue at the beginning of the 20th century. *Id.* Perforated rolls of paper transposed the notes from a musical composition into a form that was read by the pianola's player mechanism. *Id.*

[39] White-Smith Music Pub. Co. v. Apollo Co., 209 U.S. 1 (1908).

[40] *Id.* at 8–9.

[41] Act of Feb. 3, 1831, ch. XVI, 4 Stat. 436 (limiting protection to books, maps, charts, and musical compositions).

[42] Waring v. WDAS Broad. Station, Inc., 327 Pa. 433, 439 n.2 (1937).

[43] 209 U.S. 1 (1908).

[44] *Id.* at 18. While *Apollo* dealt with fixation for infringement rather than original protection, it is still a useful example of the previously limited scope of protection.

[45] Copyright Act of 1909, Pub. L. No. 60-349, 35 Stat. 1075.

[46] *See* PATRY, *supra* note 32, § 1.45.

[47] *See* Copyright Act of 1909, Pub. L. No. 60-349, 35 Stat. 1075–76.

[48] Copyright Act of 1976, Pub. L. No. 94-553, 90 Stat. 2541 (codified as amended at 17 U.S.C. §§ 101–1332 (2006)).

[49] 17 U.S.C. 102(a) ("Copyright protection subsists, in accordance with this title, in original works of authorship fixed in any tangible medium of expression, now known or later developed . . . .").

began at the time the work was "fixed into a tangible medium of expression."[50] Under the current Act, a work does not attain copyright protection if it is considered to be in an area of existing subject matter that the Act does not propose to protect,[51] or if it is a transient reproduction.[52]

The 1976 Act provided for an indefinite expansion of the subject matter covered—for the first time, Congress contemplated technologies not in existence at the time of the law's enactment.[53] When choosing to expand the subject matter of copyright, Congress noted that

> scientific discoveries and technological developments have made possible new forms of creative expression that never existed before. In some of these cases the new expressive forms—electronic music, filmstrips, and computer programs, for example—could be regarded as an extension of copyrightable subject matter Congress had already intended to protect, and were thus considered copyrightable from the outset without the need of new legislation. In other cases, such as photographs, sound recordings, and motion pictures, statutory enactment was deemed necessary to give them full recognition as copyrightable works.[54]

Under the 1976 Act, "copyright protection subsists . . . in 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."[55] The Act was designed to expand with technology, and while Congress may not have had works created by magic specifically in mind, the legislative history indicates that it did not want to limit protection to current technologies.

> Authors are continually finding new ways of expressing themselves, but it is impossible to foresee the forms that these new expressive methods will take. The bill does not intend either to freeze the scope of copyrightable subject matter at the present stage of communications technology or to allow unlimited expansion into areas completely outside the present congressional intent. Section 102 [of the Act] implies neither that that subject matter is unlimited nor that new forms of expression within that general area of subject matter would necessarily be unprotected.[56]

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[50] *Id.*

[51] *Id.* ("Copyright protection subsists . . . in original works of authorship . . . ."). This is in addition to the requirement of originality. *See* H.R. REP. NO. 94-1476, at 51 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659 (stating that there are "two fundamental criteria of copyright protection—originality and fixation in tangible form."). It is assumed for purposes of this paper that works discussed herein meet the originality requirement for copyright protection. *Id.*

[52] H.R. REP. NO. 94-1476, at 52.

[53] *Id.* at 51.

[54] *Id.*

[55] 17 U.S.C. § 102(a).

[56] H.R. REP. NO. 94-1476, at 51.

Congress also noted that historically, expansion of copyright to forms of expression which, although in existence for generations or centuries, were only gradually expanded as they came "to be recognized as creative and worthy of protection."[57] For example, the United States' first copyright statute in 1790 recognized "only maps, charts, and books";[58] it was only later statutes that addressed "major forms of expression such as music, drama, and works of art."[59] When enacting the current Act, Congress chose broad language, "to avoid the artificial and largely unjustifiable distinctions derived from cases"[60]—statutory copyrightability was no longer dependant "upon the form or medium in which the work is fixed."[61] Yet despite the broad range of protectable subject matter, there were other areas of existing subject matter that the Act did not propose to protect at the time.[62]

C. Fixation and the Copyright Act of 1976

A second major change to the United States copyright regime in the 1976 Act was the replacement of protection through formalities with protection at the time of fixation. Prior to the 1976 Act, the recognition of copyright protection was dictated by formalities. Determination of copyright depended solely on whether the party holding a copyright had complied with the terms of the Act in effect at the time the work was created,[63] such as registration prior to publication, the publication of the work within a specific time period, submission of copies to the Library of Congress, and proper copyright notice on the work.[64] This also implied a requirement that the work be fixed in a tangible medium of expression as a basic condition of copyright

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[57] *Id.*

[58] *Id.* at 52.

[59] *Id.*

[60] *Id.*

[61] *Id.*

> Under the [Act] it makes no difference what the form, manner, or medium of fixation may be—whether it is in words, numbers, notes, sounds, pictures, or any other graphic or symbolic indicia, whether embodied in a physical object in written, printed, photographic, sculptural, punched, magnetic, or any other stable form, and whether it is capable of perception directly or by means of any machine or device now known or later developed.

Id.

[62] *See id.* at 51–52.

[63] *See* Wheaton v. Peters, 33 U.S. 591, 663–64 (1834).

[64] *See* PATRY, *supra* note 32, § 6.3. *See also* L. Ray Patterson & Craig Joyce, *Copyright in 1791: An Essay*, 52 EMORY L.J. 909 (2003). For example, the formalities of the 1790 Act

> required that a printed copy of the title be deposited in the clerk's office of the district court where the author or other copyright proprietor resided. Within two months from the date thereof, a copy of the record was to be published in one or more newspapers printed in the United States, for the space of four weeks. . . . [W]ithin six months of publication, [the author was] to deliver a copy of the work to the Secretary of State. . . . [T]he framers of the 1790 Act conditioned the creation of each statutory grant of copyright on observance of . . . formalities.

Patterson & Joyce, *supra* note 64, at 941.

protection.[65] In the 1976 Act, Congress maintained the fixation requirement, but removed most of the formalities.[66]

Congress intended for 'fixation' to include when "the program content is transmitted live to the public while being recorded at the same time."[67] "The fixation requirement . . . [did] not require that the work be written down or recorded somewhere exactly as it is perceived by the human eye,"[68] such as music transposed onto the perforated rolls used in a pianola, or a recording on a cassette tape, vinyl record, or compact disk. It sought to limit fixation by "exclud[ing] from the concept purely evanescent or transient reproductions such as those projected briefly on a screen, shown electronically on a television or other cathode ray tube, or captured momentarily in the 'memory' of a computer."[69] The antagonist for this issue was the desire to create a mechanism by which live broadcasts, such as televised football games, could meet the fixation requirement,[70] while maintaining a bar on federal copyright protection for unrecorded performances.[71]

While originality is a factual determination based on the actual work,[72] fixation is based on the medium, whether the work is fixed in a tangible form.[73] It could be argued that we must know what the work is (that is, understanding and defining the technology embodying it) in order for it to be copyrightable subject matter. We could say that if we do not really know what the work is, then we cannot determine whether it falls within the protections of the Act. This is not true. The Copyright Act clearly contemplated a future technology without regard to our understanding of the technology.[74] What the work "is" is irrelevant with respect to how it came to be fixed in a tangible medium.[75]

D. Harry Potter and the Copyright Act of 1976

1. Is a Magically-Animated Painting Copyrightable Subject Matter?

Suppose an artist has painted the work of art which depicts a woman, who is known as the Gryffindor Fat Lady. Through some unknown technology (or perhaps through magic), the woman in the painting is then given the ability to speak, move, and make decisions based on input. The Fat Lady ("Gryffindor Sentinel")[76] is

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[65] H.R. REP. NO. 94-1476, at 52.

[66] *Id.*; *see also* Judicial Improvements Act of 1990, Pub. L. No. 101-650, § 703, 104 Stat. 5089, 5316 (removing all remaining formalities of fixation) (codified as amended at 17 U.S.C. § 102(a) (2006)).

[67] H.R. REP. NO. 94-1476, at 52.

[68] Midway Mfg. Co. v. Artic Int'l, Inc., 547 F. Supp. 999, 1007 (N.D. Ill. 1982).

[69] H.R. REP. NO. 94-1476, at 53.

[70] *Id.* at 52.

[71] *Id.* at 52–53.

[72] It is assumed for purposes of this article that all magically created works discussed herein meet the originality requirement for copyright protection.

[73] *See* 17 U.S.C. § 101 (2006).

[74] *See* H.R. REP. NO. 94-1476, at 51–52.

[75] *See* 17 U.S.C § 102(a).

[76] The Fat Lady will henceforth be referred to as the Gryffindor Sentinel.

programmed to act as the sentinel at the entrance to the Gryffindor tower.[77] For the purpose of this hypothetical,[78] she is not alive, merely the animation of a character created by the artist. She has no free will. She is not a person. She cannot not act outside the bounds that the artist has set for her. Unless it has been contemplated by the artist, she will not change from her ball gown into a bikini.[79]

The magical painting may be considered a window into a reality created by the artist who, through "magic," programs all aspects of her perceived personality, any specific functions to perform, and decides her limitations—that is, the parameters of how she reacts and responds to input. In the case of the Gryffindor Sentinel, her creator has given her the ability to sing, speak to other people in the painting, interact with characters in other magically animated paintings, and verbally interact with those viewing the work from the "outside." She has been programmed to stand guard over the Gryffindor Tower and protect its inhabitants. However, she cannot act in a manner not contemplated by the artist.

With these technological parameters in mind, this discussion turns to whether the Gryffindor Sentinel, or the painting itself, would be subject matter covered under the Act.[80] First, it could be argued that the magic painting in our example falls into a combination of three categories of copyrightable subject matter: (1) a "literary work[]";[81] (2) a "pictorial, graphic, and sculpture work[]";[82] and (3) a "dramatic work,"[83] "motion picture"[84] or other "audiovisual work."[85] Regardless of magic, the work was painted by an artist, on a canvas. Were it not for the magical animation, the painting would require no special category to invoke protection under the Act; it can be argued that the Gryffindor Sentinel's ability to move and speak does not render the painting unprotectable under the Act. In the past, many physical and natural phenomena which we could not adequately explain were thought to be

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[77] *See* SORCERER'S STONE, *supra* note 18, at 129–30.

[78] Until J.K. Rowling contradicts any of the assumptions made concerning these characteristics of magically-animated-painting world, they should be considered valid by the reader. These assumptions are, after all, merely being used as a vehicle to discuss the policy issues that are the focus of this article.

[79] Nor will the nurse in the painting in the infirmary appear in a miniskirt.

[80] 17 U.S.C. § 102(a).

[81] *Id.* § 102(a)(1). "'Literary works' are works, other than audiovisual works, expressed in words, numbers, or other verbal or numerical symbols or indicia, regardless of the nature of the material objects, such as books, periodicals, manuscripts, phonorecords, film, tapes, disks, or cards, in which they are embodied." *Id.* § 101.

[82] *Id.* § 102(a)(5). "'Pictorial, graphic, and sculptural works' include two-dimensional and three-dimensional works of fine, graphic, and applied art, photographs, prints and art reproductions, maps, globes, charts, diagrams, models, and technical drawings, including architectural plans." *Id.* § 101.

[83] *Id.* § 102(a)(3).

[84] *Id.* § 102(a)(6). "'Motion pictures' are audiovisual works consisting of related images which, when shown in succession, impart an impression of motion, together with accompanying sounds, if any." *Id.* § 101.

[85] *Id.* § 102(a)(6).

> "Audiovisual works" are works that consist of a series of related images which are intrinsically intended to be shown by the use of machines or devices such as projectors, viewers, or electronic equipment, together with accompanying sounds, if any, regardless of the nature of the material objects, such as films, or tapes, in which the works are embodies.

Id. § 101.

"magic" or the work of supernatural beings.[86] Therefore, merely because it may be regarded as "magic," and this "technology" was not originally contemplated by the Act, does not mean works that encompass this creation method should not fall under its protection.

Second, the phrase "now known or later developed"[87] of Section 102(a) could include, as allowable subject matter of copyright, works of art containing moving and speaking persons and animals, either by magic or other means of animation. Congress did not discriminate against magic when contemplating this section, and there is no explicit prohibition against having works created by magic as allowable subject matter.[88] Congress clearly wanted the Act to apply for technologies yet to be conceived.[89] We cannot say that the Copyright Act cannot answer the question of whether moving subjects in the photographs and paintings are fixed merely because it does not contemplate a world in which there is magic—how things work is a matter for Patent law, not Copyright law.[90] Magic was not an existing technology, and magically-animated paintings were not existing subject matter in 1976 that Congress chose not to protect. There is nothing in the legislative history to indicate Congress contemplated the physical embodiments of works created or animated through magic. Thus, magically-animated paintings could be construed to be protectable subject matter under the Act. [91]

2. Substantiating Fixation for a Painting Containing Moving and Speaking People

It must also be asked whether, because she is able to move and speak, the magically-animated Gryffindor Sentinel in our example creates an impossible hurdle for the fixation requirement. If her animation and speech are generated with a fixed program, then she generally satisfies the fixation requirement.[92] However, if she is created through magic or some other "unfixed" technology; a more detailed analysis is required to determine whether the Gryffindor Sentinel has the necessary "fixation" to be given copyright protection under the Act.

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[86] *E.g.*, BERNARD EVSLIN, HEROES, GODS AND MONSTERS OF GREEK MYTHS 29, 69 (N.Y.: Laurel-Leaf Books 2005) (1966) (showing that it was once believed that the Greek god Apollo carried the sun across the sky and Persephone's trips to and from Hades caused the changing of the seasons, and that witches were responsible for poor crop yields or other natural occurrences).

[87] 17 U.S.C. § 102(a).

[88] *See* Blausey v. U.S. Trustee, 552 F.3d 1124, 1133 (9th Cir. 2009) ("The general rule of statutory construction is that the enumeration of specific exclusions from the operation of a statute is an indication that the statute should apply to all cases not specifically excluded.") (*citing* 2A NORMAN J. SINGER & J.D. SHAMBIE SINGER, SUTHERLAND STATUTORY CONSTRUCTION § 47:23 (7th ed. 2010) (defining *expressio unius est exclusio alterius*)).

[89] *See* 17 U.S.C. § 102(a) (using "now known or later developed" to define the extent of copyright protection).

[90] *See* 35 U.S.C. § 101 (subjecting inventions and discoveries to patent law protection).

[91] *See* 17 U.S.C. § 102(a).

[92] *See* Stern Elec. Co. v. Kaufman, 669 F.2d 852, 856–67 (2d Cir. 1982) (holding that a player's participation in a video game does not destroy copyright protection for the work); Midway Mfg. Co. v. Artic Int'l, Inc., 547 F. Supp. 999, 1007–08 (N.D. Ill. 1982) (holding that a fixed program with a finite number of combinations available meets the fixation requirement).

One could argue that her transient nature prevents the magically-animated Gryffindor Sentinel in the painting from achieving fixation. However, proof of fixation can be based on three arguments: (1) the painting and the magically-animated woman are more than transient or ephemeral; (2) that the painting can be compared to videogames whose software allows for a finite number of results, for which case law holds there is the necessary fixation; and (3) the painting can be compared to comic book and cartoon characters, which are fixed initially, and are considered copyrightable if they achieve a level of development and complexity.[93]

First, the magically-animated Gryffindor Sentinel in the painting is not transient—she has substantive form for a substantial period of time, and the overall painting is not ephemeral.[94] Even if the Gryffindor Sentinel were transformed into a buff young man, one could argue that she would have existed in that form "long enough" to have achieved fixation. Her transformation can be analogized to a software program or data residing in the temporary memory of computer. When we write prose on our word processor, or run a word-processing program, even if we never save the document, it has existed in the Random Access Memory (RAM) long enough to have achieved "fixation."[95]

Second, the painting could be compared to the videogames at issue in *Stern Electronics, Inc. v. Kaufman.*[96] In *Stern*, the Second Circuit found that, while the entire sequence of sights and sounds in a space attack videogame

> are different each time the game is played, . . . many aspects of the sights and the sequence of their appearance remain constant during each play of the game . . . . [While] some of these sights and sounds will not be seen and heard during each play of the game, . . . [t]he repetitive sequence of a substantial portion of the sights and sounds of the game qualifies for copyright protection as an audiovisual work.[97]

Using this comparison, one could argue that the magically-animated painting is the same as a videogame, where the characteristics of the game/painting are fixed, but the player can manipulate the situation. The animation via magic could be equated to the artist acting as the videogame player, setting in motion a series of events based on a complex set of magically preprogrammed sights and sounds.

Third, a character in a painting who moves and talks might be seen as similar to a comic book character rather than a purely literary work, such as a novel. Courts have long held a distinction between literary characters described only through

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[93] One could also draw an analogy between the magically-animated man and a Gumby doll, which, while the basic characteristics do not change, can be manipulated into an infinite number of positions. Each particular pose may meet the fixation requirement.

[94] SORCERER'S STONE, *supra* note 18, at 129–30.

[95] Advanced Computer Servs. of Mich., Inc. v. MAI Sys. Corp., 845 F. Supp. 356, 363 (E.D. Va. 1994) (holding that a computer "program, in the form of electrical impulses in RAM, is adequately 'fixed' to qualify as a 'copy' for purposes of the Act. . . . [A] software program residing in RAM is 'stable enough to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration.'"); *see* Stern Elecs., Inc. v. Kaufman, 669 F.2d 852, 855 (2d Cir. 1982) (holding that the temporary storage of data in the memory of a computer game satisfied "the statutory requirement of a 'copy' in which the work is 'fixed'").

[96] 669 F.2d 852 (2d Cir. 1982).

[97] *Id.* at 856.

words, and those which are also embodied in drawings, such as comic book characters or cartoons.[98] Purely written descriptions of characters rarely enjoy copyright protection outside of the embodied work. In the seminal case of *Nichols v. Universal Pictures Corp.*,[99] Judge Learned Hand stated that "the less developed the characters, the less they can be copyrighted; that is the penalty an author must bear for marking them too indistinctly."[100]

However, the courts have distinguished between purely literary characters, and those embodied in other media, such as cartoons and comic books, which have an element of visual descriptiveness. In *Walt Disney Productions v. Air Pirates*,[101] the Ninth Circuit held that

> characters 'are always limited and always fall into limited patterns' . . . . When the author can add a visual image, however, the difficulty is reduced. Put another way, while many literary characters may embody little more than an unprotected idea . . . a comic book character, which has physical as well as conceptual qualities, is more likely to contain some unique elements of expression . . . [and] therefore are distinguishable from literary characters.[102]

Likewise, in *Gaiman v. McFarlane*,[103] Judge Posner held that while the individual elements of a comic book character may not be copyrightable, they may be uniquely combined so that they are drawn, named, and given speech in such a way to be "sufficiently distinctive [so as] to be copyrightable," even when the individual contributions by themselves are not.[104]

Thus, subjects in photographs and paintings who move and speak via magic could be copyrightable as distinct characters, such as those who are clearly defined in a comic book. Their fixation is not dependent solely on whether they are fixed on the canvas or photographic paper, but may also be achieved through their character development.[105] Gryffindor Sentinel has a personality and features unique to her based on the characteristics imparted to her by the artist who created her, regardless

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[98] *See, e.g.*, DeCarlo v. Archie Comic Publ'ns., Inc., 127 F. Supp. 497, 505 (S.D.N.Y. 2001).

[99] 45 F.2d 119 (1930).

[100] *Id.* at 121.

[101] 581 F.2d 751 (9th Cir. 1979).

[102] *Id.* at 755 (citations omitted) (quoting Warner Bros. Pictures, Inc. v. CBS, 216 F.2d 945 (9th Cir. 1954)). Protection for characters, however, is not entirely independent of the underlying work. Even where an individual character is sufficiently distinctive to receive protection apart from the underlying work, the character's protection remains dependant on the underlying work. *See* Burroughs v. Metro-Goldwyn-Mayer, Inc., 683 F.2d 610, 631 (2d Cir. 1982) (holding that the character Tarzan, regardless of whether the Tarzan character was sufficiently distinctive, passed into the public domain when the underlying work passed into the public domain); *see also* 1 MELVILLE B. NIMMER & DAVID NIMMER, NIMMER ON COPYRIGHT § 2.12 (2009).

[103] 360 F.3d 644 (7th Cir. 2004).

[104] *Id.* at 661. *But see* Gregory S. Schienke, Comment, *The Spawn of Learned Hand·A Reexamination of Copyright Protection and Fictional Characters: How Distinctly Delineated Must the Story Be Told?*, 9 MARQ. INTELL. PROP. L. REV. 63 (2005) (analyzing the problems inherent to character protection through copyright).

[105] *See* Nichols v. Universal Pictures Corp., 45 F.2d 119, 121 (2d Cir. 1930) ("It follows that the less developed the characters, the less they can be copyrighted; this is the penalty an author must bear for marking them too indistinctly.").

of where (or how) she moves, by magic or through a fixed program. Yet she is not a person—she was originally painted by someone who chose her personality traits and physical features, and is therefore copyrightable just as a character described in a book, play or comic strip would be.[106]

For a character to be copyrightable, it should be well-developed and have fixation.[107] If a stand-up comedian creates a well-developed character that appears in thousands of his live shows, but nothing regarding the character is ever written down, the character is not protected by copyright.[108] Likewise, merely describing a character in a book has been viewed as insufficient to grant copyright protections for the character, even though the book itself is copyrightable.[109] However, the Gryffindor Sentinel in the painting has more substance than the stand-up comedian's character; she was inked onto the canvas; something was "written down."[110] And she has more substance than a literary character in a book—she is most similar to a character developed in a comic book. Neither she nor the painting which embodies her can be copied, and she cannot be used in derivative works by those who do not have rights in her copyright.[111]

From another angle, should we conclude that a spell created a predetermined, finite outcome, then this is no different than using a software program that will produce a finite number of images on the computer screen.[112] If, however, the magic spell is a technical means to create a work, such as a printing press may be used to create an infinite number of pamphlets, the magically-animated painting may be copyrightable but for the fixation requirement. Thus, while we may conclude that, as a whole, the painting with the magically-animated woman is not copyrightable, aspects—such as the Gryffindor Sentinel as a character (like Mickey Mouse) and her characteristics—may be.

Even if it is determined that the work does not meet the fixation requirement, the animated picture may still have some protection as an unfixed work under common law copyright.[113] "[T]he underlying rationale for common law copyright (i.e., the recognition that a property status should attach to the fruits of intellectual labor) is applicable regardless of whether such labor assumes tangible form."[114] Since the enactment of the 1976 Act, statutory copyright has been governed exclusively by

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[106] Unless the artist chooses, the nurse in the painting in the infirmary will not be found in a miniskirt, nor will the Gryffindor Sentinel, who is dressed in a gown, wear a bikini. They are bound by how the artist contemplated the character. Unlike humans, the magical characters in the paintings will not act outside the bounds that have been set for them by the artist.

[107] *See Nichols*, 45 F.2d at 121.

[108] E-mail from Robert Brauneis, Assoc. Professor of Law, Co-Dir. of the Intellectual Prop. Law Program, and Co-Dir. of the Dean Dinwoodey Center for Intellectual Prop. Studies at the George Washington Univ. Law School, to author (Apr. 20, 2005 13:23 EST) (on file with author).

[109] *E.g.*, *Nichols*, 45 F.2d at 121.

[110] *See* SORCERER'S STONE, *supra* note 18, at 129.

[111] *See, e.g.*, Gaiman v. McFarlane, 360 F.3d 644, 661 (7th Cir. 2004); Walt Disney Prods. v. Air Pirates, 581 F.2d 751, 755 (9th Cir. 1978).

[112] *See* Stern Elecs., Inc. v. Kaufman, 669 F.2d 852, 855–56 (2d Cir. 1982).

[113] *See* Estate of Hemingway v. Random House, Inc., 244 N.E. 2d 250, 254 (1968) (defining common law copyright as "an author's proprietary interest in his literary or artistic creations before they have been made generally available to the public. It enables the author to exercise control over the first publication of his work or to prevent publication entirely—hence, its other name, the 'right of first publication.'").

[114] *Id.* at 346 (citing 1 NIMMER & NIMMER, *supra* note 102, § 2.02).

Federal Law.[115] However, while states are preempted from enacting laws granting copyright rights for works "fixed in any tangible medium of expression,"[116] federal law does not preclude the states from enacting copyright legislation for unfixed works.[117] "The states have such power because the constitutional requirement that a work be fixed in tangible form in order to constitute a 'writing' is not . . . applicable to common law copyright."[118]

Thus, the magically-animated painting in our example most likely could have copyright protection under the current Act. If it does not, it may still be afforded limited protection as an unfixed work based on common law copyright, depending on the state in which the alleged infringement is charged.[119]

E. Animated Paintings as Derivative Works, and Other Infringement Possibilities

A brief analysis also demonstrates that, if it were Congress' intent to ensure that an author's rights under the Act remain intact for "magic" technology, new legislation is unnecessary. For example, a clever witch or wizard residing in the United States[120] could not copy or distribute unauthorized copies of this ilk with impunity.

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[115] *See* H.R. REP. NO. 94-1476, at 52 (1976), *reprinted in* 1976 U.S.C.C.A.N. 5659.

[116] *See* 17 U.S.C. § 102(a) (2006).

[117] 1 NIMMER & NIMMER, *supra* note 102, § 2.02.

[118] *Id.; see also* H.R. REP. NO. 94-1476, at 52.

> Under the bill, the concept of fixation is important since it not only determines whether the provisions of the statute apply to a work, but it also represents the dividing line between common law and statutory protection. . . . [A]n unfixed work of authorship, such as an improvisation or an unrecorded choreographic work, performance, or broadcast, would continue to be subject to protection under State common law or statute, but would not be eligible for Federal statutory protection under section 102 [of the Act].

H.R. REP. NO. 94-1476, at 52.

[119] *See, e.g.*, CAL. CIV. CODE § 980(a)(1) (West 2009).

> The author of any original work of authorship that is not fixed in any tangible medium of expression has an exclusive ownership in the representation or expression thereof as against all persons except one who originally and independently creates the same or similar work. A work shall be considered not fixed when it is not embodied in a tangible medium of expression or when its embodiment in a tangible medium of expression is not sufficiently permanent or stable to permit it to be perceived, reproduced, or otherwise communicated for a period of more than transitory duration, either directly or with the aid of a machine or device.

Id.

[120] This article will not go into detail on what could be called HARRY POTTER AND IN PERSONUM JURISDICTION, that is, establishing *in personum* jurisdiction over a witch or wizard. One must first consider the likelihood of wizards residing in the United States and thus subject to the Copyright Act of 1976. First, the Department of International Magical Cooperation suggests that there are wizards throughout the world. J.K. ROWLING, HARRY POTTER AND THE ORDER OF THE PHOENIX 130 (Scholastic Press 2003) [hereinafter ORDER OF THE PHOENIX]. According to the available literature, witches and wizards are known to be living in Bulgaria, Ireland, and Egypt. J.K. ROWLING, HARRY POTTER AND THE GOBLET OF FIRE 102, 105 (Scholastic Press 2000) [hereinafter GOBLET OF FIRE]. There is no reason to believe that, if wizards are an international phenomena, that there would not be a population of them living in the United States, and would be governed by its laws. Since the United States is a signatory to the Berne Convention, wizards and witches are bound by it as well.

Suppose the painting of the Gryffindor Sentinel was actually created by a Muggle[121] and nothing in the painting was animated by the artist.[122] Then, a wizard buys the painting, and uses magic to animate the painting. This alteration of the original could be copyright infringement[123] as the creation of a derivative work. It could also be contemplated that if this magically-animated painting is publicly displayed, it is an unauthorized public performance of the work.[124] Other forms of infringement would be actionable as well, based on the non-magical forms of copying that are protected under the Act,[125] as well as moral rights under the Visual Artists Rights Act[126] and common law rights.

II. ISSUES OF AUTHORSHIP TO WORKS CREATED BY THE MAGICALLY-ANIMATED SUBJECTS IN PAINTINGS[127]

"The Fat Lady had vanished from her portrait. . ."[128]

It could be argued that the policy reason for fixation is to have some stable point of reference that establishes what the protected "work" really is, and to a lesser

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[121] In the Harry Potter universe, a "Muggle" is the term used to refer to a person who does not possess magical powers; a person who is not a wizard. *See* SORCERER'S STONE, *supra* note 18, at 52–53.

[122] Or if it were created by a wizard or witch who chose not to animate the painting.

[123] Establishing a wizard's liability for copyright infringement is no different than it would be for a Muggle. The plaintiff would have the burden of proving that there she owns a valid copyright, and that the wizard infringed on one of the plaintiff's § 106 rights in the painting: reproduction rights, the right to prepare derivative works, public distribution rights, public performance rights, public display rights, and certain digital audio transmission rights, 17 U.S.C. § 106 (2006), which are limited through exceptions such as "fair use", 17 U.S.C. § 107, reproduction rights for libraries and archives, 17 U.S.C. § 108, and others. The defendant would then have the burden of proving that either (1) the material was not copyrightable, (2) that he did not infringe on the copyright, or (2) that he did infringe, but the infringement was covered by one of the defenses, such as the fair use exception. *See generally* 3 NIMMER & NIMMER, *supra* note 102, § 12.11 (discussing the various burdens of proof in an infringement action). There is no need to further expand in this essay, other than to say that what normally applies to Muggles—the term in the Harry Potter universe which refers to a person who does not possess magical powers, i.e. a person who is not a witch or wizard—would also be applicable to infringements by wizards. *See* SORCERER'S STONE, *supra* note 18, at 52–53.

[124] *See* 17 U.S.C. § 106(4). This is a complex issue best reserved for another article.

[125] *See id.* § 106.

[126] Pub. L. No. 101-650 § 603(a), 104 Stat. 5089, 5128–29 (1990) (codified as amended at 17 U.S.C. § 106A). This paper will not discuss either Berne Convention implications or moral rights in visual or other forms of works covered by the Copyright Act. For an in-depth analysis concerning moral rights in the United States, *see generally* Brian T. McCartney, Comment, *"Creepings" and "Glimmers" of the Moral Rights of Artists in American Copyright Law*, 6 UCLA ENT. L. REV. 35 (1998) and Burton Ong, *Why Moral Rights Matter: Recognizing the Intrinsic Value of Integrity Rights*, 26 COLUM. J.L. & ARTS 297 (2003).

[127] This article will not attempt to describe how works by the ghosts, such as Nearly-Headless-Nick, would fall under the Copyright Act—how can you contemplate the length of the copyright as "life of the author plus 70 years," when the author had been dead for *centuries* prior to creating the work? Would all their posthumous works immediately become part of the public domain? Where would be the incentive to create? Such a subject falls more into the metaphysical realm.

[128] AZKABAN, *supra* note 19, at 160.

extent to establish the date at which protection is established for the purposes of priority.[129] Under these rationales for the fixation requirement, it can be illustrated how current law would be adequate with regard to magically animated images.

A. The Gryffindor Sentinel Sings

Suppose an author composes a song on Monday, and on Tuesday Gryffindor Sentinel sings that song. The owner of copyright in the painting claims that the song's human author infringed the painting, since the painting was created last Friday. The author could try to claim independent creation, but that is all a matter of evidence—perhaps the Gryffindor Sentinel whispered the song to the author when no one else was looking. How can one tell if, when the painting was created on Friday, the song was part of what was created at that time?

An answer may be found by analyzing the song and the Gryffindor Sentinel as separate creations, and does not require new legislation to address the issue. The song would have its own fixation requirement independent of the woman in the painting, and would have its own date of fixation. In addition, vocalization of the song by the Gryffindor Sentinel might not necessarily be fixed if the two are bifurcated as to their copyrightability. Until it is written or recorded, there is no fixation of the song.[130]

This is analogous to how the Act is applied to current technology. A law professor may own the same computer for several years, yet what is created on it, such as a law review article, does not have the creation date of the day the professor bought the computer, or the day the computer was built. A writing has the creation date and is copyrightable as of the day it was actually created and achieved fixation.[131] Just as a law review article is created as of its date of fixation, merely because the painting which contained the character who sang the song was produced on Friday does not mean that the song was created on that day as well.[132] Works of art created by humans do not have the birth date of the artist as their creation date; they gain protection as of their own fixation date.[133] It is well established that

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[129] *See* Atkins v. Fischer, No. 99-0800, 2001 U.S. Dist. LEXIS 25277, at *15–16 (D.D.C. Nov. 30, 2001); Dean v. Burrows, 732 F. Supp. 816, 822 (E.D. Tenn. 1989); E. Mishan & Sons, Inc. v. Marycana, Inc., 662 F. Supp. 1339, 1344 (S.D.N.Y. 1987).

[130] This article will not discuss the ability to establish a common law copyright for the performed song.

[131] *See* 17 U.S.C. 302(a).

[132] *See id.*

[133] *See id.* The longevity of wizards is also of concern—some apparently have been alive for several hundred years, something not contemplated by Congress when enacting the term limit section of Copyright Act. Using his Sorcerer's Stone to create the Elixir of Life, "which will make the drinker immortal." SORCERER'S STONE, *supra* note 18, at 220. The book also reports that Nicolas Flamel was 665 years old, and his wife 658. *Id.* at 220. J. K. Rowling has indicated that Albus Dumbledore was 115 years old. J.K. ROWLING, *Wizard of the Month Archive*, J.K. ROWLING OFFICIAL SITE, http://www.jkrowling.com/textonly/en/wotm.cfm (last visited Sept. 30, 2010). Thus, for a wizard who only lived 200 years, the 'life plus 70' length of copyright protection could protect paintings for several hundred years, and could potentially run into problems with the constitutional requirement that works be protected "for a limited time." U.S. CONST. art. I, § 8, cl. 8. A song created by the Gryffindor Sentinel in the painting, where the painted woman is considered to be the author and copyright owner, would have unlimited copyright protection, definitely running afoul of

thoughts and ideas are not copyrightable, only expressions of those thoughts/ideas, and until the idea is expressed, it has no copyright protection.[134] That the idea was formed by the Gryffindor Sentinel in a painting should not alter this rule of law.

B. The Magic of Artificial Intelligence

If the Gryffindor Sentinel is in fact the creator of a song, it should next be determined who, if anyone, under the Act, is the author and owner of the work's copyright. Issues such as a magically-animated person's standing to sue in courts of law and equity, as well as licensing his or her copyrighted works are closely related to similar issues concerning Artificial Intelligence ("AI").[135] In the last decade, great strides have been made in the field of AI. While many of us would equate this with science fiction, magic, or run amok robots,[136] in truth, AI is used in everyday society in such technologies as voice recognition telephone answering systems,[137] and is a driving force behind the latest generation of computer games.[138] While it cannot completely take the place of a person, one entrepreneurial company has created a virtual girlfriend for the lonely-hearted, for a fee.[139] The advances in completing "a complex, everyday task—driving—underscores how artificial intelligence may at last be moving beyond the research laboratory."[140]

Advancements in AI have also led to the creation of computers that write prose and poetry.[141] But, like our magically-animated Gryffindor Sentinel, we should question whether the work should—and if so, how—be protected by copyright,[142] and

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the Copyright Clause. *Id.* Perhaps such works be placed more appropriately in the same category as an anonymous or pseudonymous work and have "a term of 95 years from the year of its first publication, or a term of 120 years from the year of its creation, whichever expires first." 17 U.S.C. § 302(c).

[134] 17 U.S.C. § 102(b). *See, e.g.*, Peter Pan Fabrics, Inc. v. Martin Weiner Corp., 274 F.2d 487, 489 (2d Cir. 1960) ("there can be no copyright in the 'ideas' disclosed but only in their 'expression'").

[135] Artificial Intelligence is "the science and engineering of making intelligent machines, especially intelligent computer programs. . . . Intelligence is the computational part of the ability to achieve goals in the world. Varying kinds of degrees of intelligence occur in people, many animals and some machines." John McCarthy, *Basic Questions*, WHAT IS ARTIFICIAL INTELLIGENCE?, http://www-formal.stanford.edu/jmc/whatisai/node1.html (last updated Nov. 12, 2007).

[136] *See, e.g.*, BLADE RUNNER (Warner Brothers 1982); "I, ROBOT" (Twentieth Century Fox 2004).

[137] John Markoff, *Behind Artificial Intelligence, a Squadron of Bright Real People*, N.Y. TIMES, Oct. 14, 2005, at C3.

[138] Seth Schiesel, *Redefining the Power of the Gamer*, N.Y. TIMES, June 7, 2005, at E1.

[139] Keith Bradsher, *Sad, Lonely? For a Good Time, Call Vivienne*, N.Y. TIMES, Feb. 24, 2005, at C1.

[140] Markoff, *supra* note 137. *See also* John Markoff, *In a Grueling Desert Race, a Winner, but not a Driver*, N.Y. TIMES, Oct. 9, 2005, at 28 (describing the robotic vehicle designed by Stanford University that won the Pentagon's contest to create a car that could drive itself).

[141] *See, e.g.*, Daniel Akst, *Computers as Authors? Literary Luddites Unite!*, N.Y. TIMES, Nov. 22, 2004, at E1; Teresa Riordan, *Patents; Investor Creates Software that Can Turn a Computer into a Cyberpoet*, N.Y. TIMES, Nov. 24, 2003, at C7. *See also* U.S. Patent No. 6,647,395, (filed Nov. 1, 2000) (issued Nov. 11, 2003) ("describing a method of generating a poet personality to read poems and generate analysis of poems").

[142] For a discussion advocating copyright protection for such works, *see* NAT'L COMM'N ON NEW TECHNOLOGICAL USES OF COPYRIGHTED WORKS, FINAL REPORT 43–46 (1978) [hereinafter CONTU

whether the current law is sufficient to support this policy.[143] In 1976, in the early days of personal computing, the National Commission on New Technological Uses of Copyrighted Works (CONTU), concluded that computer-generated works are protectable by copyright, and assuming that there is original authorship, or input by the human user, the rights should reside with the user of the software program, not the author of the program.[144] However, with the advances in computer science over the last three decades, most of which may have been unforeseen at the time of the CONTU report,[145] this should be revisited to determine if the reasoning then still holds true today. By again using the Gryffindor Sentinel rather than current technology, it is apparent that certain obstacles present in 1976 in allowing

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FINAL REPORT], *available at* http://digital-law-online.info/CONTU/contu-toc.html; Joseph G. Arsenault, Comment, *Software Without Source Code: Can Software Produced by a Computer Aided Software Engineering Tool Be Protected?*, 5 ALB. L.J. SCI. & TECH. 131 (1994).

[143] Public policy in general favors copyright protection of creative works. *See generally* Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975).

> The limited scope of the copyright holder's statutory monopoly, like the limited copyright duration required by the Constitution, reflects a balance of competing claims upon the public interest: Creative work is to be encouraged and rewarded, but private motivation must ultimately serve the cause of promoting broad public availability of literature, music, and the other arts. The immediate effect of our copyright law is to secure a fair return for an "author's" creative labor. But the ultimate aim is, by this incentive, to stimulate artistic creativity for the general public good. "The sole interest of the United States and the primary object in conferring the monopoly," this Court has said, "lie in the general benefits derived by the public from the labors of authors."

Id. (footnotes omitted) (citations omitted) (quoting Fox Film Corp. v. Doyal, 286 U.S. 123, 127 (1932)).

[144] CONTU FINAL REPORT, *supra* note 142, at 45.

[145] *Id.* at 44.

> This discussion [as to whether work is one of human authorship, with the computer merely being an assisting instrument, or whether the traditional element of authorship in the work were actually conceived and executed the computer] may have stemmed from a concern that computers either had or were likely to soon achieve powers that would enable them independently to create works that, although similar to other copyrightable works, would not or should not be copyrightable works because they had no human author. The development of this capacity for "artificial intelligence" has not yet come to pass, and, indeed, it has been suggested to this Commission that such a development is too speculative to consider at this time. On the basis of its investigations and society's experience with the computer, the Commission believes that there is no reasonable basis for considering that a computer in any way contributes authorship to a work produced through its use. The computer, like a camera or typewriter, is an inert instrument, capable of functioning only when activated either directly or indirectly by a human. When so activated it is capable of doing only what it is directed to do in a way it is directed to perform.

Id. (footnote omitted). *But see* Pamela Samuelson, *Allocating Ownership Rights in Computer-Generated Works*, 47 U. PITT. L. REV. 1185, 1196 (1986).

> No deep study of the literature on artificial intelligence is necessary to observe that a great many brilliant scientists take the idea of machine intelligence very seriously. While there may be some debate about how advanced the state of the art currently is, there is no question but that many machine-generated works are already available, and that in the future they can be expected to become ever more complex, sophisticated and valuable.

Id. (footnote omitted).

authorship and copyright ownership reside in an AI will continue to persist regardless of advances in the technology.

Having determined that public policy supports copyright protection of a work created by the Gryffindor Sentinel, it must be determined who, if anyone, is the author of such a work. There are several possibilities for the work: (1) no one is considered the author or owner; (2) the Gryffindor Sentinal is considered the author and owner; or (3) the creator/animator of the Gryffindor Sentinel is considered the author and owner.[146]

For the purposes of this discussion, there is no one controlling the magically animated Gryffindor Sentinel. This is comparable to traditional computer usage, where there is the programmer who writes the software, and may have claim to authorship for the computer-generated work, but who is differentiated from any subsequent human user of the program—that is, once created, there is no human providing meaningful programming afterwards.[147] As asserted by CONTU, the computer programmer did not fix the work; she merely "created the possibility of a work but did not embody it in the tangible medium of expression."[148] The traditional program is operated by a user, who fixes the work.[149] In this scenario, the wizard merely created the possibility of a work by establishing the parameters of the Gryffindor Sentinel's possible actions. This would seem to invoke the first option, with no rights in the Sentinel-generated output.[150] However, one could argue that the Gryffindor Sentinel's actions are independent of any user. This could be compared to the argument that if the AI is acting independently of a user, then the work created could be considered "randomly determined and unpredictable."[151] If copyrights are limited to humans,[152] and since copyright should only be conferred upon an author who conceives as well as fixes a work, the work created by the

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[146] For an in-depth evaluation of options for authorship, *see* Samuelson, *supra* note 145, at 1196. She critiques five ownership allocation possibilities of the intellectual property interests in the output from a computer-generated work: to the computer, the user, the author of the generator program, both jointly, or no one. *Id.* She concludes that, with some exceptions, the user of a computer generator program should be considered the author of a computer-generated work, and should be free to exploit this product commercially. *Id.* at 1224. If the generated work contains a recognizable amount of protected expression from the generator program, it should be considered either a "copy" or a "derivative work" of the generator program, and the owner of the generator program copyright should have the associated intellectual property rights. *Id.* at 1190–92.

[147] *See* Pamela Samuelson et al., *A Manifesto Concerning the Legal Protection of Computer Programs*, 94 COLUM. L. REV. 2308, 2317–18 (1994).

[148] MARSHALL LEAFFER, UNDERSTANDING COPYRIGHT LAW 109 (5th ed., 2010).

[149] *See* CONTU FINAL REPORT, *supra* note 142, at 45.

[150] *See id.* at 44 (arguing that there should be no ownership rights in this situation).

[151] *See* LEAFFER, *supra* note 148, at 109.

[152] *See* Samuelson, *supra* note145, at 1199–1200.

> The system has allocated rights only to humans for a very good reason: it simply does not make any sense to allocate intellectual property rights to machines because they do not need to be given incentives to generate output. All it takes is electricity (or some other motive force) to get the machines into production. The whole purpose of the intellectual property system is to grant rights to creators to induce them to innovate. The system has assumed that if such incentives are not necessary, rights should not be granted. Only those stuck in the doctrinal mud could even think that computers could be "authors."

Id. (footnote omitted).

Gryffindor Sentinel, just like the AI, could be treated as merely output or data, without ownership rights to anyone.

The second option, authorship by the Gryffindor Sentinel, would require revisions to the current Act, and entails a discussion of a variety of constitutional questions. First, just as the necessity of the incentive to create weighs against authorship by an AI,[153] so would it for magically-animated characters. In addition, if it is owned by the Gryffindor Sentinel or AI, questions regarding standing must also be addressed, as well as what would be an adequate remedy for infringement. In such an instance, "could a human-like artificial intelligence" constitute a "person"?[154] While neither the Constitution nor the Copyright Act requires human authors,[155] there are several difficulties with granting AIs or magically-animated characters rights under the Act. The length of the term of copyright would be infinite, which would violate the Patent and Copyright Clause, which specifies that copyrights may only be held "for a limited time."[156] Both the Gryffindor Sentinel and a computer can potentially live forever, or well past the lifespan contemplated by Congress when it enacted the current length of term.[157] This option would require new legislation for the Gryffindor Sentinel's works to fall within the Act.

The third scenario, where the wizard who created the Gryffindor Sentinel is deemed the "author" of the copyrighted work, could fit under the current Act for length of term,[158] but it may fail the requirement of "originality."[159] The Copyright Act requires that copyright protection is "in original works of authorship," and it can be argued that a work created by the Gryffindor Sentinel is not an original work of authorship by the wizard. However, if the work is considered "owned"[160] and not "authored" by the wizard, then the work authored by the Gryffindor Sentinel could be categorized as a "work made for hire"[161] under the Act:

> A "work made for hire" is (1) a work prepared by an employee within the scope of his or her employment; or (2) a work specially ordered or

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[153] *See* U.S. CONST. art. I, § 8, cl. 8.; LEAFFER, *supra* note 148, at 108. *See also* discussion *supra* Part II.B.

[154] There are other potential constitutional issues regarding the status of AIs. For example, once AI becomes sophisticated to the point of closely resembling humans, do we grant them the same rights as humans, or treat them as a separate class of beings? Would a sufficiently sophisticated, "human-like artificial intelligence, constitute a person for the purposes of protection under the 14th Amendment, or is such protection limited, by the 14th Amendment's language, to those who are 'born or naturalized in the United States?'" Glenn Harlan Reynolds, *Bork's Inkblot*, N.Y. TIMES, Sept. 12, 2005, at A21.

[155] *See* U.S. CONST. art. I, § 8, cl. 8; 17 U.S.C. §§ 101, 102 (2006).

[156] U.S. CONST. art. I, § 8, cl. 8 ("Congress shall have Power . . . To promote the Progress of Science and useful Arts, by securing *for limited Times* to Authors and Inventors the exclusive Right to their respective Writings and Discoveries.") (emphasis added).

[157] Sonny Bono Copyright Term Extension Act, Pub. L. No. 105-298, § 102, 112 Stat. 2827, 2827 (1998) (codified as amended at 17 U.S.C. § 302).

[158] 17 U.S.C. § 302(a). For works created by a known person, "[c]opyright in a work . . . subsists from its creation and . . . endures for a term consisting of the life of the author and 70 years after the author's death." *Id.*

[159] *See id.* § 102(a).

[160] *See id.* § 101 ("[c]opyright owner, with respect to any one of the exclusive rights comprised in a copyright, refers to the owner of that particular right.").

[161] *See id.*

> commissioned . . . if the parties expressly agree in a written instrument signed by them that the work shall be considered a work made for hire.[162]

There are obvious difficulties in having the Gryffindor Sentinel's work fit into the scheme of a "work made for hire." If she is considered an employee, one must wonder, among other concerns, whether it should be considered voluntary employment, and how she would be paid. In *Community for Creative Non-Violence v. Reid*,[163] the Supreme Court established factors to determine whether a hired party is an employee under common law, and thus fall under the first definition of a "work for hire" by an "employee". These include

> the hiring party's right to control the manner and means by which the product is accomplished. Among other factors . . . are the skill required; the source of the instrumentalities and tools; the location of the work; the duration of the relationship between the parties; whether the hiring party has the right to assign additional projects to the hired party; the extent of the hired party's discretion over when and how long to work; the method of payment; the hired party's role in hiring and paying assistants; whether the work is part of the regular business of the hiring party; whether the hiring party is in business; the provision of employee benefits; and the tax treatment of the hired party. No one of these factors is determinative.[164]

It would be difficult to apply many of these to the Gryffindor Sentinel when she creates an otherwise copyrightable work—she has no control over when and how long to work, she is not paid, she cannot hire or pay assistants, her wizard creator may not be in business, there are most likely no employee benefits, and if she is not paid, then there are no taxes on her salary. Also, because she is not working voluntarily and is not paid, she could be viewed as a slave.

Analogizing this to Artificial Intelligence, if the evolution of AI technology leads to a class of AIs that are on many levels, human-like, then the civil rights of an AI could become an issue.[165] Claiming the AI's creator as the author or owner of the work has several difficulties with conformance to the current Act, as well as the Constitution. Until an AI is considered sentient enough to be able to negotiate licensing rights and have constitutional standing to file infringement suits, it is difficult to find an option which would confer rights in the work to a human person,

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[162] *Id.*

[163] 490 U.S. 730 (1989).

[164] *Id.* at 832–33.

[165] Star Trek fans will instinctively think of Data, the android in the television series *"Star Trek: The Next Generation*." In one episode, Data was considered sentient enough to avoid disassembly because he was determined to have the right to choose. *Star Trek: The Next Generation, The Measure of a Man*, (Paramount Feb. 13, 1989). It was argued by Data's advocate, Captain Picard, that "all beings are created but that does not necessarily make them the property of their creator." *Star Trek Database*, STAR TREK, http://www.startrek.com/database_article/measure-of-a-man (last visited Sept. 1, 2010). The adjudicator agreed, "asserting that Data may be a machine, but he is owned by no one and has the right to make his own decisions regarding his life." *Id.*

and the first option, to allow any such works to automatically enter the public domain, may, at the present time, be the most prudent choice.

Perhaps if AIs are eventually considered persons under the law,[166] then at that time, AIs may be granted ownership "of the exclusive rights comprised in a copyright,"[167] but the work would be categorized as an "anonymous work"[168] for the purposes of determining the length of term—"95 years from the year of its first publication, or a term of 120 years from the year of its creation, whichever expires first."[169] The owner of the AI could also be considered the "guardian" of the AI for the purposes of negotiating rights and protecting its interests.[170] To attempt to regulate without first seeing how the technology evolves, or determining whether existing law can resolve issues as they arise, may hamstring advancement or waste legislators' time in an attempt to solve a non-existent problem.[171]

III. FINAL THOUGHTS

If we say that the Copyright Act has no answer to the question of whether moving subjects in the photographs and paintings are fixed, because it does not contemplate a world in which there is magic, then the phrase "now known or later developed"[172] becomes meaningless and goes against the rules of statutory construction.[173] If this were not true, the lack of explicit protection for certain forms of media might inhibit some artists from creating works. The artist may fear that the current law would not adequately protect works created through new technology, or that the current law might provide too much protection, exposing her to accusations of copyright infringement.

The Copyright Act of 1976 was written before the invention of the iPod or the proliferation of MP3 files as a preferred format for music recording;[174] legislation has attempted to fill in the gaps in copyright protection when, after the technology had reached an advanced level of development and public use, it concluded that further protection was needed.[175] If, in the future, works created by AI (or magical means)

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[166] *See, e.g.*, ISAAC ASIMOV, THE BICENTENNIAL MAN AND OTHER STORIES (Doubleday 1976); Sue Short, *The Measure of a Man? Asimov's Bicentennial Man, Star Trek's Data, and Being Human*, 44 EXTRAPOLATION 209 (2003).

[167] 17 U.S.C. § 101 (2006).

[168] *Id.* ("An 'anonymous work' is a work on the copies or phonorecords of which no natural person is identified as author.").

[169] *Id.* § 302(c).

[170] It is, at this time, hard to fathom why an AI would need money, but that is not an issue to be discussed in this paper.

[171] An example bearing out the argument that waiting to see how a technology develops may be the more prudent course of action can be seen through Congress' and the FCC's recent consideration of 'net neutrality issues. *See supra* note 8 and accompanying text.

[172] 17 U.S.C. § 102(a)

[173] *See* Blausey v. U.S. Trustee, 552 F.3d 1124, 1133 (9th Cir. 2009).

[174] *See* Daniel Boffey, *Apple Admit Briton Did Invent iPod, but He's Still not Getting Any Money*, MAIL ON SUNDAY (London), Sept. 7, 2008, at 48 (discussing an early digital music play invented in 1979).

[175] *See, e.g.*, Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998) (expanding and strengthening copyright protections on the internet and provided a "safe harbor" to internet service providers) (codified at 17 U.S.C. §§ 1201–05, 1301–32).

are determined not to be afforded rights under the Copyright Act, and it is further determined to be against public policy to limit copyright protection of such works, Congress may enact legislation to restore copyright.[176] This is not without precedent. Several copyright amendments have pulled works back from the public domain, usually due to the lack of formalities, when it was in accordance with public policy to do so.[177]

> [E]vidence from the First Congress points toward constitutionality [of pulling works back from the public domain]. The Copyright Act of 1790 granted copyright protection to certain books already printed in the United States at the time of the statute's enactment. If such works were unprotected by common law copyright, that statute would necessarily have granted protection to works previously unprotected—that is, works in the public domain. . . . [A]s early as 1834 the Supreme Court was of the view that the Act of 1790 created new copyright protection rather than simply recognizing existing protections . . . .
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> . . .The Act of Dec. 8, 1919 gave the President authority to give authors publishing works abroad during World War I time to comply with procedural formalities in the United States after the war's end. Similarly, the Act of Sept. 25, 1941 gave the President authority to make copyright protection available to authors who might have been temporarily unable to comply with required formalities because of disruption or suspension of needed facilities.[178]

More recently, in 1994, the Uruguay Round Agreement Act ("URAA"),[179] established copyrights in works that had entered the public domain.[180] In addition,

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[176] *See* U.S. CONST. art. I, § 8, cl. 8.

[177] *See* discussion *supra* Part I.C.

[178] Luck's Music Library, Inc. v. Gonzales, 407 F.3d 1262, 1265 (D.C. Cir. 2005) (citations omitted).

[179] Uruguay Round Agreements Act, Pub. L. No. 103-465, 108 Stat. 4809 (1994) (codified as amended in scattered sections of 7, 17, 18, 19, 28, 29 U.S.C.). The URAA implemented Article 18 of the Berne Convention. *See* 17 U.S.C. § 104A (2006); Berne Convention for the Protection of Literary and Artistic Works, art. 18, Sept. 9, 1886, S. Treaty Doc. No. 99-27, 1161 U.N.T.S. 3. Section 514 of the URAA established copyright for certain works that had previously entered the public domain in the United States, but were protected under the law in the country where the work was initially published. 17 U.S.C. § 104A.

[180] 17 U.S.C. § 104A(a)(1) ("Copyright subsists . . . in restored works . . . . Any work in which copyright is restored under this section shall subsist for the remainder of the term of copyright that the work would have otherwise been granted in the United States if the work never entered the public domain in the United States.") Section 104A(h)(6) defines a "restored work" as:

> an original work of authorship that . . .
> (B) is not in the public domain in its source country through expiration of term of protection;
> (C) is in the public domain in the United States due to—

upholding the URAA based on the historic constitutionality of restoring copyright,[181] the enactment of the URAA "enhanced the United State's position in negotiating with the European Union countries for benefits for American authors."[182]

As for the second issue, courts are loath to provide more protection than Congress has explicitly conveyed. If Congress remains reactionary, there are still adequate protections to foster creativity. The courts have been careful not to extend protection where Congress did not intend. For example, while the DMCA granted copyright holders additional legal protections regarding anti-circumvention devices, in *Chamberlain Group, Inc. v. Skylink Technologies, Inc.*,[183] the Federal Circuit held that the DMCA's anticircumvention provision[184] "prohibit[ed] only forms of access that bear a reasonable relationship to the protections that the Copyright Act otherwise affords copyright owners."[185] Skylink was accused of creating an anticircumvention device, supposedly aimed at infringing Chamberlain's copyright, by manufacturing and selling a universal garage door opener that allowed consumers to access copyrighted software embedded in Chamberlain garage door openers that were purchased by the consumers.[186] The Federal Circuit held that, since there was no copyright infringement by the consumers and there was no critical nexus between access and copyright protection, the consumers and Skylink were immune from anticircumvention and contributory infringement liability.[187] The consumers were merely using the copy of Chamberlain's copyrighted software embedded in the garage door openers that they had purchased.[188] Prior to the Federal Circuit's decision,

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(i) noncompliance with formalities imposed at any time by United States copyright law, including failure of renewal, lack of proper notice, or failure to comply with any manufacturing requirements;
(ii) lack of subject matter protection in the case of sound recordings fixed before February 15, 1972; or
(iii) lack of national eligibility;
(D) has at least one author or rightholder who was, at the time the work was created, a national or domiciliary of an eligible country, and if published, was first published in an eligible country and not published in the United States during the 30-day period following publication in such eligible country; and
(E) if the source country for the work is an eligible country solely by virtue of its adherence to the WIPO Performances and Phonograms Treaty, is a sound recording.

Id. § 104A(h)(6).

[181] *See infra* note 183 and accompanying text.

[182] *Luck's Music Library*, 407 F.3d at 1264 (citing Eldred v. Ashcroft, 537 U.S. 186 (2003)); *cf.* Missouri v. Holland, 252 U.S. 416, 433 (1920) (holding that the treaty power authorizes Congress to enact legislation in pursuant to a treaty that it would be otherwise barred from enacting, as long as the treaty does not contravene any prohibition in the Constitution).

[183] 381 F.3d 1178 (Fed. Cir. 2004).

[184] 17 U.S.C. § 1201 (2006).

[185] Chamberlain Group, Inc. v. Skylink Tech., Inc., 381 F.3d 1178, 1202; *see also* Lexmark Int'l, Inc. v. Static Control Components, Inc., 387 F.3d 522, 551 (6th Cir. 2004) (holding that the seller of a computer chip used in third-party remanufactured toner cartridges, which mimicked the microchip contained in Lexmark's toner cartridge, did not violate the anticircumvention sections of the DMCA, since the toner loading software program did not qualify for copyright protection).

[186] *Chamberlain*, 381 F.3d at 1183.

[187] *Id.* at 1204.

[188] *Id.*

Congress had been poised to act to clarify and protect this type of use.[189] Apart from the usual infringement concerns (i.e. derivative works), an author undertaking a new art form should not be overly worried about infringement actions against her, due to overprotection.

In pondering whether Congress should legislate copyright issues regarding magically-animated works or artificial intelligence before either is a reality,[190] we can see the larger issue regarding the wisdom in enacting laws based on the unknowable results of our scientific inquiry. It may not be prudent for Congress to consider future potential technologies when contemplating or creating legislation, or if they choose to do so, whether they should use a more open-ended approach, as they did for subject matter covered under the Copyright Act of 1976. To place confines on technology that does not yet exist could unwittingly stifle creativity in the same manner that drives the public policy behind the enablement requirement of patent applications.[191]

Congress may wish to be reactionary in legislating rights and limitations in technology, give it a chance to grow, see if there are problems adapting existing law to it, and if protection proves to be inadequate or the interpretation of the law with regards to the new technology is against public policy, then legislate. Often, it is old technology used in new ways that creates a need for legislation.[192] The time when an

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[189] *See* Digital Media Consumers' Rights Act of 2003, H.R. 107, 108th Cong. (2003), § 5. The bill would have provided a statutory fair use exception.

> [I]t is not a violation of [Section 1201] to circumvent a technological protection measure in connection with access to, or the use of, a work if such circumvention does not result in an infringement of the copyright in the work . . . and [i]t shall not be a violation of this title to manufacture, distribute, or make non-infringing use of a hardware or software product capable of enabling significant non-infringing use of a copyrighted work.

Id.

[190] Computers and copyright are not the only area of concern with regard to legislating future technologies. Genetic testing, cloning, and other advances in biological sciences are also ripe for such a discussion, but not in this paper. *See, e.g.*, David A. Shapiro & Anthony W. Fox, *Biotechnology Products and Development*, *in* PRINCIPLES AND PRACTICE OF PHARMACEUTICAL MEDICINE 289 (Lionel D Edwards et al. eds., Jon Wiley & Sons, Ltd. 2d ed. 2007) ("[T]issue proliferation *ex vivo* and implantation seems to be a simpler ethical situation than parents having offspring by entirely ordinary means. Consensus guidelines are needed, but . . . they must remain flexible in order to deal with technological innovation that is not going to stop . . . .").

[191] *See* 35 U.S.C. § 112 (2006) (requiring that a patent application disclose how to make the invention, to prevent the inventor from claiming more than to which he or she is entitled). "The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art . . . to make and use the same." *Id.*; O'Reilly v. Morse, 56 U.S. 62 (15 How. 62) 120 (1854) (holding that an inventor cannot claim in a patent more than he has invented—in this case, Samuel Morse was attempting to enforce patent rights on any method of communication using electric technology). If an inventor could gain a patent which he did not know how to make, it would prevent others from doing so, and thus hinder scientific advancement. For example, if I were able to patent a "matter transporter," such as that used in *Star Trek*, I would prevent others who actually could create such a device from doing so without first purchasing from me a license to use my patent's technology.

[192] *E.g.*, Artists' Rights and Theft Prevention Act of 2005, Pub. L. No. 109-9, § 102(a), 119 Stat. 218, 218 (codified as amended at 18 U.S.C. § 2319B) (attempting to combat rampant piracy of movies, Congress enacted this bill, which, in part, criminalized the unauthorized video recording inside movie theatres).

AI can write poetry may not be far off, but it may never be prolific enough to require a serious examination as to the need for legislation, or the courts may find a way to successfully interpret current law. As this paper demonstrates, often current law is satisfactory to enforce the rights of those it is meant to protect, and balance the rights of authors and copyright owners to be protected against the public interest. To attempt to create a system while the technology is in its infancy is akin to Muggles legislating for magic. It may already be covered under the current regime and be an unnecessary waste of Congressional resources.